

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service

State Agricultural Experiment Stations, Cooperating

1999 - 2000

**UNIFORM EASTERN SOFT RED WINTER WHEAT
NURSERY**

Report

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This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the U.S. Department of Agriculture containing preliminary data which have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. The report is primarily a tool for the use of the cooperators and their official staff and those persons having direct and special interest in the development of agricultural research programs.

This report includes data furnished by the State Agricultural Experiment Stations. The report is not intended for publication and should not be referred to in literature citations nor quoted in publicity or advertising. Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

USDA-ARS
National Small Grains Germplasm Research Facility
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November, 2000

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1999-2000 UNIFORM EASTERN SOFT RED WINTER WHEAT NURSERY

LIST OF ENTRIES AND PEDIGREES

Entry No.	Cultivar/ Designation	Pedigree	Contributor	1st Year in Nurs
1	Caldwell	Benhur sib*2/Siete Cerros	Check	88-89
2	Foster	KY 83-60/Tyler//KY 83-75 (previously tested as KY 85C-31-6)	Check	96-97
3	Patton	SW85*94/IN82104B1-3-2 (previously tested as A94-1048)	Check	96-97
4	Roane	VA71-54-147(CI17449)/C68-15//IN65309C1-18-2-3-2 (prev. VA93-54-429)Check	Check	95-96
5	IL91-15911	IL84-3511/Caldwell	F.Kolb	97-98
6	VA97W-375	Coker 9803/Freedom	C.Griffey	98-99
7	VA96W-247	Coker 9803/Freedom	C.Griffey	98-99
8	T104	T814*2/T408	J.Wilson	98-99
9	T106	T814*2/T408	J.Wilson	98-99
10	IL94-6727	IL87-3721 (Cardinal/Howell)/2*IL85-3132-1 (McNair1003/Caldwell)	F.Kolb	98-99
11	VA98W-586	IN71761A4-31-5-48/VA71-54-147/McNair1813/VA91-54-219(Roane sib)	C.Griffey	99-00
12	VA98W-593	IN71761A4-31-5-48//VA7154-147/McNair1813/AL870365(C747*2/Amigo)C.Griffey	C.Griffey	99-00
13	D6144	YAN770.4 (89INTCB#6)/Caldwell	R.Ward	99-00
14	HTY93-72A	Roland/McNair1003/3/Coker65-20*4/RBB//Coker71-21/Blueboy II	K.Miskin	99-00
15	G65201	IL84-3010/T812	S.Brown	99-00
16	G53135	Sawyer/T812	S.Brown	99-00
17	G53209	T812/FL302	S.Brown	99-00
18	G60220	Cardinal/Clark	S.Brown	99-00
19	GA911316E45	C9134/GA85240 (Hunter/FL74265//IN71761A4/C80-13)	J.Johnson	99-00
20	GA91436E29	NASW85-94/Andy//GA841359 (GA79122/Saluda)	J.Johnson	99-00
21	IL94-1653	MOW12213/IL87-3235-1 (Cardinal/Caldwell)	F.Kolb	99-00
22	IL95-947	IL85-3132-1 (McNair1003/Caldwell)/Pio2571	F.Kolb	99-00
23	KY89C-804-14-2	Madison/CL860426	D.Van Sanford	99-00
24	KY90C-292-4-1	Madison/Pio.Exptl XW571//2548	D.Van Sanford	99-00
25	KY90C-054-6	FFR555W/2548	D.Van Sanford	99-00
26	OH645	Pio.2555/Clark//Howell/OH389	P.Lipps	99-00
27	OH650	Pio. 2555/OH374//Coker 9835/Freedom	P.Lipps	99-00
28	AW M96-3609	HRW9776/SSBHB//Cardinal	C.Beazer	99-00
29	AW M96-3649	88T-2733/WA7163	C.Beazer	99-00
30	AW M96-3706	E86*1052/OH394	C.Beazer	99-00
31	B950346	Coker 9803/FL85363-G21-6	J.Hancock	99-00
32	B950770	McNair1003/C916/4/C65-20*4//Wichita*//Transfer/3/R-Blueboy	J.Hancock	99-00
33	B950799	Coker 81-20//McNair 3271/FL301	J.Hancock	99-00
34	88204RB1-2-1-6-70	P81405/INW8841//P8279	H.Ohm	99-00
35	92145E8-7-7-1-9	Coker 84-27/Cotipora//Roazon/Caldwell*2	H.Ohm	99-00
36	92201D5-2-80	P86350RA1-14//Roazon/Caldwell*2/3/OH470-1	H.Ohm	99-00
37	T115	T814//Coker 747/Roazon	J.Wilson	99-00
38	T116	T68/T814	J.Wilson	99-00
39	AR839-27-1-3	Terral 101/Pioneer 2548	R.Bacon	99-00
40	AR656-5-1	Corin/3/FL302//Coker 833/Hunter	R.Bacon	99-00

LOCATION NOTES

Bay, Arkansas

cooperators: June Hancock, Craig Allen, David Hill
Novartis Seeds, Inc.
planted: October 16, 1999
harvested: June 7, 2000
comments: Two words sum up the year: Stripe Rust. Other than that we had a good growing season. Dry fall, warm winter, cool spring.

Fayetteville, Hope, Keiser, Kibler, Arkansas

cooperators: Eugene A. Milus
University of Arkansas
comments: Stripe rust: average of 2 reps at Kibler, taken on April 6 (flag leaf emerged) and April 17 (post flowering; stripe rust was the only significant disease. Viruses: average of 3 reps from artificially infested soilborne virus nursery at Keiser; ratings averaged over notes taken on March 7 (jointing stage) and March 29 (flag leaf emergence), with 0=no disease and 9=severe stunting and chlorosis; plant vigor estimated visually on May 16 (soft dough) with 0=dead plants and 9=maximum yield potential; plant height measured on May 16. Powdery mildew: average of 2 reps; data at Hope and Fayetteville taken on April 17 (milk) and May 5 (milk), respectively. Leaf rust: average of 2 reps taken at Fayetteville on May 22 (late soft dough); leaf rust was not uniform and some plants were beginning to senesce.

Keiser, Arkansas

cooperators: Robert K. Bacon, John Kelly
University of Arkansas
planted: October 18, 1999
harvested: June 13, 2000
fertilizer: 150-46-0
comments: Yields were very high for this location.

University of Delaware

cooperators: Bob Uniatowski
University of Delaware
planted: October 27, 1999
harvested: July 6, 2000
fertilizer: 118 N, 54 P₂O₅, 108 K₂O
comments: Very hot at flowering. A week of wet, cloudy weather just at harvest.

Marianna, Florida

cooperators: Ronald D. Barnett, L. Schell
University of Florida
planted: November 19, 1999
fertilizer: 75-50-75

Griffin, Georgia

cooperators: Jerry Johnson, Barry Cunfer
University of Georgia
planted: November 5, 1999
fertilizer: 90N

Aberdeen, Idaho

cooperators: Charles Erickson, Scott McNeil, Harold Bockelman
USDA-ARS National Small Grains Collection
planted: September 21, 1999
harvested: July 17, 2000
comments: Mild winter.

Brownstown, Illinois

cooperators: Frederic L. Kolb, Norman. Smith, Larry Boze
University of Illinois
planted: October 5, 1999
harvested: June 30, 2000
fertilizer: preplant 43N; spring topdress 80N
comments: Mild winter. Excellent plots for this location. Rain delayed harvest.

Urbana, Illinois

cooperators: Frederic L. Kolb, Norman Smith, Larry Boze
University of Illinois
planted: September 27, 1999
harvested: June 28, 2000
fertilizer: fall 40N; spring 60N
comments: Mild winter, early, cool season. Some early lodging. Disease development slow. 0.5 oz/A Harmony Extra applied April 15. Scales 0 or 1=mild, 5 or 9=severe. SBMV data are from 2 reps of 2' rows in the SBMV nursery. BYDV data are from 2 reps of paired PAV inoculated and control hills. BYDV % stunting = mean of 2 reps (ht. of control hill – ht. of inoculated hill) / ht of control hill. Scab data are from 2 reps of 3' rows in a misted, inoculated field nursery. DON analysis by Michigan State University.

Greensburg, Indiana

cooperators: Samuel J. Brown
Genesis Seed Research
planted: October 7, 1999
harvested: June 27, 2000
fertilizer: fall 30-62-52; spring 60N
comments: Mild winter. Ample moisture February through June. Cooler than normal April and May. Rain at harvest. Lodging is a 3-plot average; entries 1, 11, 12, 19, 20 each had at least one plot that was 7 or above.

Lafayette, Indiana

cooperators: Gordon Cisar
Cargill
planted: October 5, 1999
harvested: July 2, 2000
comments: ANOVA over 1 rep at each of 2 locations. West Lafayette replicate with heavy and early leaf rust infestation, and low yield (45bu/A). South Lafayette rep with later leaf rust infestation, good lodging pressure, and high yield (101bu/A). Test weight values from high yield location.

West Lafayette, Indiana

cooperators: Herbert W. Ohm
Purdue University
planted: October 13, 1999
harvested: June 28, 2000
fertilizer: 30Fall/80SpringN-80P-00K
comments: Excellent performance trial: good emergence, uniform stands, very mild winter, early spring, dry conditions in February to mid-May delaying disease onset. Septoria: leaves – *S. tritici* and *S. nodorum*, data on June 14; glumes - *S. nodorum* notes recorded 2 days prior to harvest. Soilborne mosaic (SBM): average of 2 reps, plots 0.5m rows at Urbana, IL. Fusarium head blight (FHB): data from 1.0m rows seeded in disked corn stalks and misted during 5-8pm and 7-9am on non-raining days 2 weeks prior to heading to 3 weeks after heading – not inoculated.

West Lafayette, Indiana

cooperators: Roger Ratcliffe, Sue Cambron
USDA-ARS Crop Production & Pest Control Research Unit
comments: Provided Hessian fly data.

Woodburn, Indiana

cooperators: Curtis Beazer, Jon Slaughter
AgriPro Wheat
planted: October 20, 1999
harvested: July 12, 2000
fertilizer: Feb29 30N Mar27 70N
comments: Rain delayed planting by 2.5 weeks resulting in small plants and thin stands in the spring. Split N and a good spring allowed stands to recover nicely, but the extra N, rain, and delayed harvest encouraged lodging. The test site was in corn stubble which resulted in good uniform scab incidence. Incidence score - # heads of 10 with scabby florets.

Haven, Kansas

cooperators: Sid Perry
Cargill

Manhattan, Kansas

cooperators: Lucretia Coonrod, Allan K. Fritz
Kansas State University

Wichita, Kansas

cooperators: James A. Wilson
Trio Research, Inc.
planted: October 5, 1999
harvested: July 1, 2000
fertilizer: 50N, fallow ground
comments: Wet and warm winter; very dry filling period; heavy BYD; nitrogen loss in spots.

Lexington, Kentucky

cooperators: David A. Van Sanford, S. Swanson, B. Kennedy
University of Kentucky
planted: October 22, 1999
harvested: July 1, 2000
fertilizer: P,K according to soil test; 45N at GS3; 60N at GS5
comments: Harvest was delayed by rain, resulting in lower test weights. Leaf rust: N/A means flag leaves gone. Virus complex: spindle streak and wheat streak. Virus ratings: 0=none, 3=VS.

Logan County, Kentucky

cooperators: David A. Van Sanford, S. Swanson, B. Kennedy
University of Kentucky
planted: October 20, 1999
harvested: June 13, 2000
fertilizer: P,K according to soil test; 45N at GS3; 60N at GS5

Clarksville, Maryland

cooperators: Jose Costa, Emma Shirley
University of Maryland
planted: October 8, 1999
fertilizer: 60N
comments: Uneven incidence of lodging affected yield CV.

Lenawee & Saginaw Counties, Michigan

cooperators: Rick Ward
Michigan State University
planted: Lenawee September 28, 1999
Saginaw September 27, 1999
harvested: Lenawee July 7, 2000
Saginaw July 12, 2000
fertilizer: Lenawee 400# 6-17-25 + 7% SO + 2% Mg + 1% Mn; 90N spring
Saginaw 300# 5-16-33 + 2% Mn + 4% Cu + 2% Mg; 90N spring
comments: Data from two locations in Michigan: Lenawee County and Saginaw County.
Each location consisted of one rep. Sprouting score is 0-9 with 9 being the worst.

St. Paul, Minnesota

cooperators: Dave Long, Don McVey
USDA-ARS Cereal Disease Lab
comments: Adult plant field reaction to leaf rust and stem rust (McVey) and seedling reaction to leaf rust (Long).

Columbia, Missouri

cooperators: Anne L. McKendry, David N. Tague
University of Missouri
planted: October 12, 1999
harvested: June 22, 2000
fertilizer: fall 37N; spring 87N
comments: Very mild winter. Extraordinarily dry conditions at planting, throughout the winter and during much of the spring season. BYDV pressure was high. Rain commenced just prior to harvest and persisted to delay harvest by 2-3 weeks. Test weights were low as a result. There was some sprouting.

Plymouth, North Carolina

cooperators: Paul Murphy
North Carolina State University
planted: November 5, 1999
fertilizer: 120N
comments: Warm winter. Heavy rust.

Raleigh, North Carolina

cooperators: Steven Leath
USDA-ARS Plant Science Research Unit
comments: Powdery mildew evaluations were completed on detached primary leaves from ten day old plants. Leaves were cut into 3 cm sections and suspended on 0.5 % water agar amended with 50 ppm benzimidazole. Leaf sections were uniformly inoculated with conidia of *Blumeria graminis* f. sp. *tritici* (=*Erysiphe graminis* f. sp. *tritici*). The leaf sections were evaluated eight and ten days after inoculation on a ten point scale. The data from two replications and two rating dates were combined and condensed into one of three categories: Resistant (R), Intermediate (I), or Susceptible (S).

Lincoln, Nebraska

cooperators: P.S. Baenziger
University of Nebraska
planted: September 28, 1999
harvested: June 22, 2000
fertilizer: preplant 50N
comments: The location had a dry fall with above average temperatures. This led to more BYDV than normal. The winter was exceptionally mild and there was no winterkilling. the spring was very dry until harvest, which was delayed by rain. Harvest was 10 days earlier than normal – record early harvest.

Lincoln, Nebraska

cooperators: Robert A. Graybosch
USDA-ARS Wheat, Sorghum, and Forage Research Unit
comments: Provided the 1RS data.

Ithaca, New York

cooperators: Mark E. Sorrells
Cornell University
planted: October 7, 1999
harvested: July 24, 2000
fertilizer: 200# 10-20-20 fall; 100# am.nitrate spring

Smithville, Ohio

cooperators: H.N. Lafever
Sunbeam Extract Co.
fertilizer: 300# 5-20-20 at planting
comments: Extreme lodging occurred prior to June 1 (high fertility site). Thus, not harvested.

Wooster, Ohio

cooperators: Pat Lipps, Larry Herald
Ohio State University, OARDC
planted: September 28, 1999
harvested: July 6, 2000
fertilizer: 200# 6-24-24; 70N topdress
comments: Harmony Extra 0.5oz/A.

Wooster, Ohio

cooperators: Charles Gaines
USDA-ARS Soft Wheat Quality Lab
comments: Quality data. Composited samples were from Keiser AR, West Lafayette IN, and Blacksburg VA.

Enid, Oklahoma

cooperators: Brett F. Carver, Melisa Rice
Oklahoma State University
comments: Standard used to set scale for acid soil tolerance was 2163, with an assigned value of 2 on a scale of 1 (tolerant) to 5 (susceptible).

Nairn, Ontario

cooperators: Les Shugar
W.G. Thompson & Sons, Ltd.
planted: October 19, 1999
fertilizer: 225 kg 6-28.6-27 preplant; 230 kg 46-0-0 at GS21

Ridgetown, Ontario

cooperators: Arend E. Smid
Ridgetown College, University of Guelph
planted: October 19, 1999
harvested: July 12, 2000
fertilizer: fall ppi 200 kg 6-24-24/ha; spring td 55 kg N/ha as NH₄ NO₃ on 4/17
comments: Excellent growing conditions.

University Park, Pennsylvania

cooperators: Marvin L. Risius
Pennsylvania State University
planted: October 7, 1999
harvested: July 5, 2000
fertilizer: 80-45-191
comments: Winter weather was mild with limited snow cover. Rainfall was above average in April and June, but slightly below average in March and May.

Knoxville, Tennessee

cooperators: Dennis West
University of Tennessee
planted: October 15, 1999
harvested: June 23, 2000
fertilizer: 70-75-75
comments: Take-all resulted in high CV's and variable test weights.

Overton, Texas

cooperators: Lloyd R. Nelson
Texas A&M University
planted: October 19, 1999
harvested: May 17, 2000
fertilizer: 106-178-178

Blacksburg, Virginia

cooperators: Carl A. Griffey
Virginia Tech
planted: October 8, 1999
harvested: July 2, 2000
fertilizer: preplant 25-50-100; 75-0-0 on 3/10
comments: Test weights are low as a result of 3 days of rain prior to harvest. Belgian lodging scale = area x intensity x 0.2; area is rated on a scale of 1 (plots unaffected) to 10 (entire plot affected); intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying totally flat). Leaf rust and powdery mildew data from a single rep at Warsaw, VA.

Arlington, Wisconsin

cooperators: Joe Lauer, Mark Martinka
University of Wisconsin
planted: September 18, 1999
harvested: July 14, 2000
fertilizer: 75 lb spring (split)

YIELD (bu/acre)

	Bay AR #@	Keiser AR #@	Univ of Del DE #@	Marianna FL	Griffin GA	Aberdeen ID	Brownstown IL #@
1	Caldwell	53.9 36	82.0 40	65.3 17	38.8 40	44.1 37	109.3 37
2	Foster	48.3 39	89.1 32		49.0 35	50.1 33	114.9 32
3	Patton	52.3 37	84.4 37	76.6 5	71.9 4	60.4 27	95.9 39
4	Roane	79.5 6	103.5 5	86.1 1	58.3 26	83.7 4	129.8 11
5	IL91-15911	71.9 18	95.1 22		52.7 33	52.1 32	110.5 36
6	VA97W-375	69.8 22	102.3 7		61.9 19	84.9 3	118.6 28
7	VA96W-247	58.1 34	86.6 35	65.4 16	49.4 34	77.8 7	146.6 1
8	T104	69.7 23	102.5 6		65.3 10	73.7 14	131.8 6
9	T106	72.7 15	98.9 13		62.4 18	75.1 11	141.7 2
10	IL94-6727	78.4 9	94.7 24		55.0 29	72.1 18	130.7 9
11	VA98W-586	65.8 28	98.9 14	72.1 7	70.0 6	73.6 15	125.4 18
12	VA98W-593	79.2 7	112.7 2	80.8 2	77.3 1	95.7 1	112.2 33
13	D6144	66.5 26	86.0 36	53.3 27	61.9 20	73.1 16	76.3 40
14	HTY93-72A	78.5 8	100.3 11	54.9 26	62.7 16	71.1 20	130.7 8
15	G65201	85.3 4	107.5 3	64.7 18	67.6 7	74.6 12	122.3 22
16	G53135	71.1 21	92.6 29	57.4 23	64.4 12	67.7 23	111.3 34
17	G53209	78.1 10	97.7 15	67.7 13	60.6 22	54.6 30	111.1 35
18	G60220	78.1 11	90.9 30	64.5 19	70.1 5	71.6 19	117.8 29
19	GA911316E45	71.5 20	82.8 39	75.1 6	64.2 14	72.9 17	123.4 20
20	GA91436E29	57.0 35	93.0 27	70.7 10	74.3 2	88.2 2	115.7 30
21	IL94-1653	66.0 27	101.6 10	57.2 24	47.8 36	69.4 21	122.7 21
22	IL95-947	86.6 2	100.2 12	67.8 12	64.4 13	61.6 26	140.8 3
23	KY89C-804-14-2	77.0 13	90.9 31	49.6 30	56.3 28	47.9 35	119.8 27
24	KY90C-292-4-1	85.5 3	104.9 4	62.4 20	65.7 9	22.5 40	124.9 19
25	KY90C-054-6	76.8 14	95.0 23	43.1 34	58.8 25	39.5 38	126.3 17
26	OH645	69.1 24	97.7 16	50.6 28	45.5 38	55.1 29	131.0 7
27	OH650	58.4 33	94.0 26	71.2 8	40.7 39	38.1 39	129.6 12
28	AW-M96-3609	72.4 17	96.2 17	46.8 32	58.2 27	56.4 28	129.1 15
29	AW-M96-3649	49.2 38	94.2 25	50.2 29	53.0 32	54.1 31	135.5 5
30	AW-M96-3706	71.7 19	88.1 34	69.4 11	47.3 37	49.5 34	129.4 13
31	B950346	65.0 29	95.5 20	67.7 14	60.1 23	76.6 9	119.9 26
32	B950770	58.8 32	88.7 33	70.9 9	59.1 24	80.1 5	121.2 23
33	B950799	62.7 31	92.8 28	65.5 15	54.5 31	75.2 10	105.1 38
34	88204RB1-2-1-6-70	23.8 40	83.8 38	46.2 33	62.7 17	63.8 24	129.4 14
35	92145E8-7-7-1-9	88.7 1	115.3 1	59.9 21	73.2 3	78.1 6	139.1 4
36	92201D5-2-80	77.7 12	96.2 18	79.5 3	61.9 21	44.6 36	115.3 31
37	T115	66.9 25	96.0 19	58.2 22	63.7 15	74.4 13	120.9 24
38	T116	72.7 16	102.2 9	76.8 4	66.9 8	77.2 8	120.2 25
39	AR839-27-1-3	81.7 5	102.3 8	56.6 25	54.7 30	63.5 25	128.7 16
40	AR656-5-1	64.6 30	95.5 21	49.1 31	64.6 11	68.5 22	129.9 10
LOCATION MEANS		69.0	95.8	63.3	59.9	65.3	122.4
LSD (.05)		7.1	11.9	7.1	12.4		17.06
CV %		6.3	7.6	6.8	10.26		10.14
REPS		3	3	3	2	1	4
Harvest Plot Size (sq.ft.)		58.9	40.8	107	61.65	50	18.67
							34

YIELD (bu/acre)

	Urbana IL #	Greensburg IN #@	Lafayette IN #	W.Lafayette IN #@	Woodburn IN #@	Haven KS	Manhattan KS
1	Caldwell	70.1 21	92.3 37	85.1 3	55.9 40	53 39	55.6 9
2	Foster	64.1 29	104.8 27	61.5 39	71.9 31	71 2	55.9 7
3	Patton	63.2 30	107.6 18	72.7 22	78.6 19	70 6	50.0 20
4	Roane	98.2 1	111.8 9	89.9 1	89.5 3	65 16	55.2 11
5	IL91-15911	69.1 23	99.2 33	72.0 25	72.1 30	54 34	53.2 15
6	VA97W-375	65.6 28	108.9 13	86.4 2	79.8 18	68 7	53.7 14
7	VA96W-247	70.1 22	112.3 8	72.1 24	79.9 17	60 23	54.7 12
8	T104	51.9 40	102.1 29	68.1 30	72.6 29	71 3	41.1 37
9	T106	52.3 39	98.5 34	69.4 29	77.7 21	56 31	47.6 25
10	IL94-6727	80.7 10	100.9 31	72.5 23	81.2 15	62 19	42.5 32
11	VA98W-586	89.9 4	121.0 2	75.7 13	87.7 6	67 9	40.1 38
12	VA98W-593	86.5 7	107.1 21	83.2 4	89.2 4	67 10	57.3 5
13	D6144	59.9 35	92.3 38	65.7 36	67.1 38	51 40	36.8 40
14	HTY93-72A	81.3 9	110.5 12	72.7 21	84.2 10	66 11	50.1 18
15	G65201	77.0 15	111.0 11	82.6 5	83.1 13	61 20	55.6 8
16	G53135	89.2 5	107.8 16	73.2 19	77.9 20	54 35	58.1 4
17	G53209	78.3 13	108.7 14	73.7 18	84.0 11	58 29	49.0 24
18	G60220	66.5 24	107.4 19	79.2 9	69.2 36	54 36	45.6 29
19	GA911316E45	55.6 37	84.0 40	69.8 28	76.3 24	54 37	46.9 26
20	GA91436E29	53.6 38	103.2 28	64.7 38	60.6 39	60 24	39.9 39
21	IL94-1653	72.3 18	122.1 1	79.2 10	88.7 5	61 21	65.3 1
22	IL95-947	79.9 11	118.0 3	82.3 6	83.8 12	68 8	58.6 3
23	KY89C-804-14-2	66.2 25	96.0 35	70.5 27	70.3 33	55 32	51.6 17
24	KY90C-292-4-1	83.8 8	107.8 17	77.8 11	84.7 9	71 4	52.6 16
25	KY90C-054-6	71.2 20	105.2 26	66.7 33	77.6 22	66 12	54.3 13
26	OH645	78.9 12	114.4 5	58.0 40	82.6 14	60 25	42.3 35
27	OH650	59.6 36	107.2 20	66.5 35	71.5 32	61 22	42.4 34
28	AW-M96-3609	66.1 26	106.6 23	64.8 37	73.1 27	63 17	41.9 36
29	AW-M96-3649	71.9 19	116.7 4	71.9 26	84.9 8	54 38	50.1 19
30	AW-M96-3706	78.1 14	108.5 15	67.3 32	68.7 37	59 28	49.7 21
31	B950346	65.9 27	106.0 25	75.2 15	69.4 34	66 13	55.5 10
32	B950770	61.0 33	111.4 10	77.1 12	74.1 25	63 18	49.4 22
33	B950799	60.8 34	112.7 7	67.9 31	69.3 35	60 26	49.2 23
34	88204RB1-2-1-6-70	72.5 17	106.4 24	75.4 14	80.5 16	55 33	43.2 31
35	92145E8-7-7-1-9	91.7 2	114.0 6	80.9 7	96.4 1	71 5	56.7 6
36	92201D5-2-80	90.1 3	106.7 22	74.9 16	91.6 2	84 1	46.0 28
37	T115	62.8 31	95.9 36	80.6 8	74.1 26	57 30	44.7 30
38	T116	76.3 16	84.8 39	74.4 17	76.4 23	66 14	46.4 27
39	AR839-27-1-3	87.3 6	101.5 30	72.8 20	86.6 7	66 15	58.9 2
40	AR656-5-1	61.3 32	99.8 32	66.6 34	72.8 28	60 27	42.5 33
LOCATION MEANS		72.0	105.8	73.5	77.9	62.2	49.8
LSD (.05)		12.4	7.34	16.5	8.2	6	9.2
CV %		10.6	5.7	11.3	9.2	5.9	10.9
REPS		3	3	2	4	3	
Harvest Plot Size (sq.ft.)		34	32	40	32	60	
							3

YIELD (bu/acre)

	Wichita KS	Lexington KY #@	Logan Co. KY #@	Clarksville MD #	Len., Sag. MI #@	Columbia MO #@	Plymouth NC #@
	rank	rank	rank	rank	rank	rank	rank
1	Caldwell	30.1	38	66.2	38	59.5	37
2	Foster	34.3	26	82.3	24	72.5	14
3	Patton	40.5	11	103.3	3	76.6	8
4	Roane	44.6	6	91.8	13	58.1	39
5	IL91-15911	35.8	20	80.6	27	65.3	28
6	VA97W-375	46.3	4	97.2	5	67.9	23
7	VA96W-247	38.4	15	94.2	8	74.3	12
8	T104	45.1	5	80.4	28	70.2	21
9	T106	38.3	17	77.6	35	63.3	33
10	IL94-6727	34.8	24	85.9	19	76.9	7
11	VA98W-586	36.4	19	94.4	7	67.8	24
12	VA98W-593	51.8	1	108.2	2	70.7	20
13	D6144	30.1	39	78.4	33	71.1	18
14	HTY93-72A	42.6	8	80.4	29	79.2	5
15	G65201	47.4	2	81.7	26	71.0	19
16	G53135	39.8	12	86.5	18	65.5	26
17	G53209	38.4	16	83.8	23	67.0	25
18	G60220	34.2	27	81.8	25	71.7	16
19	GA911316E45	34.8	25	56.8	40	55.0	40
20	GA91436E29	35.5	21	78.2	34	60.2	36
21	IL94-1653	40.7	10	93.6	11	70.2	22
22	IL95-947	47.2	3	90.3	14	82.5	1
23	KY89C-804-14-2	35.0	23	76.9	37	71.7	17
24	KY90C-292-4-1	25.7	40	93.8	9	73.6	13
25	KY90C-054-6	37.5	18	95.6	6	81.5	2
26	OH645	33.5	29	83.9	22	79.8	3
27	OH650	32.7	31	89.4	15	75.6	10
28	AW-M96-3609	30.6	36	61.6	39	63.5	32
29	AW-M96-3649	34.0	28	101.7	4	77.0	6
30	AW-M96-3706	30.2	37	80.3	30	71.8	15
31	B950346	31.0	34	88.9	17	62.9	34
32	B950770	38.6	13	89.1	16	62.4	35
33	B950799	44.3	7	79.9	31	64.7	29
34	88204RB1-2-1-6-70	31.5	33	85.9	20	74.9	11
35	92145E8-7-7-1-9	42.2	9	92.4	12	76.1	9
36	92201D5-2-80	38.6	14	115.3	1	63.7	31
37	T115	35.4	22	79.9	32	64.5	30
38	T116	33.5	30	85.0	21	58.8	38
39	AR839-27-1-3	30.7	35	93.8	10	79.8	4
40	AR656-5-1	32.2	32	77.2	36	65.4	27
LOCATION MEANS		37.1		86.1		69.6	
LSD (.05)		11		9.01		6.82	
CV %		18		7.71		5.82	
REPS		3		3		2	
Harvest Plot Size (sq.ft.)		29		40		40	
						56	
						55	
						55.5	
						55	

YIELD (bu/acre)

	Lincoln NE	Ithaca NY	Wooster OH	Nairn ON	Ridgetown ON	Univ.Park PA	Knoxville TN
	rank	#	#@	#@	#@	#@	#
1	Caldwell	50.7	36	41.2	40	56.3	40
2	Foster	63.9	11	65.3	7	70.2	34
3	Patton	58.6	20	66.7	5	77.1	21
4	Roane	60.2	12	65.7	6	86.6	5
5	IL91-15911	56.7	24	61.2	19	77.1	22
6	VA97W-375	59.6	14	66.9	4	88.3	3
7	VA96W-247	64.0	10	75.0	1	89.5	2
8	T104	57.2	22	51.0	35	74.3	29
9	T106	51.6	34	42.2	39	68.6	36
10	IL94-6727	71.1	4	53.8	27	75.5	25
11	VA98W-586	57.6	21	53.4	29	87.2	4
12	VA98W-593	51.5	35	74.0	2	94.3	1
13	D6144	51.7	33	53.2	30	71.9	31
14	HTY93-72A	64.7	9	58.8	23	77.7	18
15	G65201	59.5	15	61.9	17	71.1	32
16	G53135	46.9	39	58.9	22	83.0	7
17	G53209	49.5	38	61.8	18	76.5	23
18	G60220	59.2	19	59.4	20	76.0	24
19	GA911316E45	68.6	6	57.7	24	59.7	39
20	GA91436E29	44.6	40	51.5	34	70.4	33
21	IL94-1653	56.7	25	59.1	21	79.2	16
22	IL95-947	76.9	1	64.3	11	81.6	10
23	KY89C-804-14-2	53.2	30	64.0	13	74.1	30
24	KY90C-292-4-1	56.0	26	64.5	9	80.1	14
25	KY90C-054-6	52.5	32	49.4	36	78.0	17
26	OH645	53.3	28	52.8	31	81.5	11
27	OH650	53.0	31	64.1	12	65.3	38
28	AW-M96-3609	50.6	37	52.0	32	66.0	37
29	AW-M96-3649	53.3	29	62.1	16	77.4	20
30	AW-M96-3706	72.1	2	51.6	33	77.6	19
31	B950346	68.9	5	64.4	10	68.9	35
32	B950770	59.3	17	67.7	3	80.6	13
33	B950799	66.8	7	64.9	8	80.1	15
34	88204RB1-2-1-6-70	53.4	27	54.2	26	74.9	26
35	92145E8-7-7-1-9	71.7	3	44.3	38	81.9	9
36	92201D5-2-80	59.3	18	62.2	15	82.4	8
37	T115	59.4	16	47.0	37	74.4	28
38	T116	60.1	13	55.4	25	81.4	12
39	AR839-27-1-3	65.2	8	62.7	14	85.3	6
40	AR656-5-1	57.2	23	53.5	28	74.6	27
LOCATION MEANS		58.6		58.5		76.9	
LSD (.05)				6.9		7.1	
CV %				12.6		5.7	
REPS		1		3		3	
Harvest Plot Size (sq.ft.)		16		41		44.5	
						48.9	
						23.3	
							39

YIELD (bu/acre)

	Overton	TX		Blacksville		Arlington		ENTRY MEANS		ENTRY MEANS	
		#		#@		#@		ALL LOCATIONS		IN-REGION	
			rank		rank		rank		rank		rank
1	Caldwell	86	14	53.5	38	54.5	40	63.3	40	65.8	40
2	Foster	73	32	69.0	21	57.4	37	69.4	34	72.0	29
3	Patton	83	19	62.9	31	63.3	22	73.9	18	77.1	16
4	Roane	103	2	94.1	1	65.2	15	82.2	2	85.4	1
5	IL91-15911	79	28	76.6	10	65.4	13	72.0	25	75.6	23
6	VA97W-375	92	9	80.7	5	62.1	25	79.9	4	83.0	4
7	VA96W-247	80	25	82.3	4	67.8	6	78.2	6	80.5	9
8	T104	62	38	59.3	35	61.5	27	71.0	27	71.8	32
9	T106	83	20	71.7	15	65.0	17	70.8	29	71.7	33
10	IL94-6727	91	10	66.4	27	61.7	26	74.5	15	76.8	18
11	VA98W-586	98	6	87.0	2	70.4	3	78.0	7	81.4	5
12	VA98W-593	11	40	77.8	9	65.2	16	81.2	3	83.7	3
13	D6144	50	39	56.6	37	55.3	39	63.4	39	66.8	39
14	HTY93-72A	82	21	71.1	16	67.5	7	76.2	11	78.4	12
15	G65201	103	3	61.6	33	66.0	12	77.3	8	79.1	11
16	G53135	84	17	65.7	28	66.5	10	72.6	23	75.0	24
17	G53209	74	31	68.0	23	67.0	8	73.4	21	77.1	17
18	G60220	93	8	66.5	26	59.3	30	72.8	22	74.8	25
19	GA911316E45	91	11	62.7	32	66.4	11	69.1	35	70.1	37
20	GA91436E29	85	16	69.3	19	57.1	38	70.3	31	71.9	31
21	IL94-1653	89	12	80.3	6	69.3	4	76.9	9	80.2	10
22	IL95-947	80	26	66.8	25	63.6	20	79.4	5	81.0	6
23	KY89C-804-14-2	81	23	73.7	12	58.5	34	70.5	30	73.5	27
24	KY90C-292-4-1	89	13	84.6	3	73.1	1	75.6	12	80.7	8
25	KY90C-054-6	75	30	74.8	11	65.3	14	74.2	16	77.7	14
26	OH645	80	27	71.1	17	57.9	36	72.3	24	76.2	20
27	OH650	82	22	43.6	40	58.7	32	66.8	38	70.3	36
28	AW-M96-3609	71	35	50.9	39	64.0	19	67.6	37	69.3	38
29	AW-M96-3649	73	33	70.3	18	60.9	28	73.7	20	76.8	19
30	AW-M96-3706	66	36	58.6	36	60.1	29	69.8	33	71.9	30
31	B950346	99	5	59.4	34	63.5	21	74.0	17	75.9	21
32	B950770	95	7	71.8	14	62.1	24	75.4	13	77.6	15
33	B950799	86	15	72.3	13	58.0	35	71.8	26	74.0	26
34	88204RB1-2-1-6-70	65	37	68.9	22	58.6	33	69.0	36	70.6	35
35	92145E8-7-7-1-9	79	29	78.6	8	71.2	2	83.0	1	85.0	2
36	92201D5-2-80	81	24	64.9	30	68.2	5	76.6	10	80.8	7
37	T115	107	1	67.3	24	64.3	18	71.0	28	72.2	28
38	T116	84	18	65.5	29	66.9	9	73.7	19	75.7	22
39	AR839-27-1-3	102	4	79.4	7	62.7	23	75.3	14	77.9	13
40	AR656-5-1	73	34	69.1	20	59.1	31	69.8	32	71.3	34
LOCATION MEANS		81.5		69.4		63.2					
LSD (.05)				6.4		8.1					
CV %				6.8		7.6					
REPS		1		3		2					
Harvest Plot Size (sq.ft.)		50		45		105					

YIELD (bu/acre)

ENTRY MEANS

CV <10%

@

		rank
1	Caldwell	65.9
2	Foster	40
3	Patton	74.7
4	Roane	15
5	IL91-15911	80.2
6	VA97W-375	3
7	VA96W-247	86.5
8	T104	82.3
9	T106	27
10	IL94-6727	75.7
11	VA98W-586	29
12	VA98W-593	79.1
13	D6144	5
14	HTY93-72A	90.6
15	G65201	39
16	G53135	84.6
17	G53209	26
18	G60220	79.4
19	GA911316E45	24
20	GA91436E29	72.9
21	IL94-1653	36
22	IL95-947	32
23	KY89C-804-14-2	84.0
24	KY90C-292-4-1	28
25	KY90C-054-6	83.1
26	KY90C-054-6	11
27	OH645	76.8
28	OH650	14
29	AW-M96-3609	73.8
30	AW-M96-3649	38
31	AW-M96-3706	21
32	B950346	74.3
33	B950770	31
34	B950799	25
35	88204RB1-2-1-6-70	18
36	92145E8-7-7-1-9	71.3
37	92201D5-2-80	37
38	T115	87.6
39	T116	2
40	AR839-27-1-3	83.3
	AR656-5-1	73.0
		35
		23
		19
		34

LOCATION MEANS

LSD (.05)

CV %

REPS

Harvest Plot Size (sq.ft.)

TEST WEIGHT (lbs/bu)

		Bay AR	Keiser AR	Univ of Del DE	Marianna FL	Griffin GA
1	Caldwell	54.7	57.6	56.1	60.1	58.4
2	Foster	50.0	55.8		58.7	57.1
3	Patton	52.3	57.4	58.4	58.8	57.9
4	Roane	59.2	61.2	58.6	61.3	61.4
5	IL91-15911	55.5	58.7		58.3	57.8
6	VA97W-375	56.1	57.2		59.8	58.8
7	VA96W-247	55.1	57.7	55.4	59.3	58.8
8	T104	55.3	57.3		59.0	58.5
9	T106	57.9	55.2		59.0	57.3
10	IL94-6727	60.8	59.0		61.3	59.8
11	VA98W-586	56.0	59.3	56.5	61.0	59.2
12	VA98W-593	60.0	62.7	57.8	63.5	62.1
13	D6144	55.5	60.3	56.8	61.4	61.1
14	HTY93-72A	59.4	61.2	56.7	60.4	58.8
15	G65201	57.5	58.6	58.0	60.9	58.9
16	G53135	57.3	58.2	57.2	59.1	58.9
17	G53209	58.0	57.3	57.2	60.8	58.2
18	G60220	59.2	57.8	57.5	59.8	58.9
19	GA911316E45	54.8	58.3	56.5	60.7	58.5
20	GA91436E29	49.7	56.5	57.9	58.3	59.6
21	IL94-1653	57.7	59.0	57.8	59.6	59.2
22	IL95-947	59.5	59.6	54.5	59.0	57.8
23	KY89C-804-14-2	56.0	56.2	55.7	57.3	56.1
24	KY90C-292-4-1	57.9	58.3	56.9	61.2	58.1
25	KY90C-054-6	57.4	59.0	52.4	58.0	57.1
26	OH645	57.8	60.3	55.7	58.3	60.2
27	OH650	56.5	58.8	58.3	60.2	58.1
28	AW-M96-3609	56.4	56.5	55.8	58.1	56.9
29	AW-M96-3649	54.9	58.8	56.4	59.7	57.8
30	AW-M96-3706	57.9	57.7	57.0	57.7	56.9
31	B950346	55.6	57.1	50.8	60.7	58.8
32	B950770	54.3	59.0	57.3	62.0	61.5
33	B950799	54.3	57.4	57.4	55.7	60.5
34	88204RB1-2-1-6-70	46.5	56.2	55.5	56.9	57.4
35	92145E8-7-7-1-9	57.1	57.1	55.9	57.6	55.1
36	92201D5-2-80	59.5	60.4	57.0	62.6	57.5
37	T115	51.1	54.3	54.9	58.3	57.2
38	T116	57.9	57.9	56.4	61.1	60.1
39	AR839-27-1-3	60.5	59.6	56.0	60.3	59.9
40	AR656-5-1	56.6	58.6	56.1	59.6	59.3
LOCATION MEANS		56.2	58.2	56.4	59.6	58.6

TEST WEIGHT (lbs/bu)

		Aberdeen ID	Brownstown IL	Urbana IL	Greensburg IN	Lafayette IN
1	Caldwell	62.9	53.7	53.9	54.6	60.1
2	Foster	61.7	51.2	54.4	55.7	57.4
3	Patton	61.3	53.7	53.1	55.4	58.1
4	Roane	63.3	56.0	57.1	56.8	60.9
5	IL91-15911	61.5	52.5	53.7	55.7	57.4
6	VA97W-375	62.1	53.9	54.2	56.0	58.6
7	VA96W-247	61.6	53.8	54.9	56.5	58.6
8	T104	62.2	53.3	53.1	57.0	58.9
9	T106	62.0	52.1	51.5	55.2	58.2
10	IL94-6727	62.3	54.8	57.9	58.1	60.2
11	VA98W-586	63.0	53.5	56.6	56.5	59.3
12	VA98W-593	63.4	58.2	57.0	59.8	61.4
13	D6144	61.9	54.2	54.0	55.8	57.8
14	HTY93-72A	62.7	54.2	56.6	58.1	59.7
15	G65201	61.4	54.0	54.5	56.6	57.8
16	G53135	62.4	52.6	53.9	55.2	56.4
17	G53209	62.1	53.7	52.3	56.2	57.6
18	G60220	62.2	55.5	56.2	58.1	59.5
19	GA911316E45	63.4	53.1	54.7	57.1	58.6
20	GA91436E29	62.6	52.9	48.4	55.5	57.0
21	IL94-1653	62.8	54.8	57.2	57.9	59.3
22	IL95-947	61.3	53.3	53.6	57.4	58.7
23	KY89C-804-14-2	61.3	50.8	52.2	54.2	56.2
24	KY90C-292-4-1	62.4	52.4	55.5	55.5	57.2
25	KY90C-054-6	61.3	53.3	53.1	56.8	56.4
26	OH645	63.2	53.5	54.7	56.8	57.5
27	OH650	62.2	53.7	54.7	56.0	58.3
28	AW-M96-3609	61.2	50.9	52.3	54.1	55.7
29	AW-M96-3649	62.6	54.2	54.8	57.1	58.3
30	AW-M96-3706	62.9	53.2	56.2	56.8	58.0
31	B950346	62.8	55.0	53.0	57.9	59.0
32	B950770	63.8	56.0	54.4	58.7	59.6
33	B950799	60.0	52.1	52.2	55.8	56.5
34	88204RB1-2-1-6-70	62.6	53.3	54.0	57.0	57.9
35	92145E8-7-7-1-9	61.5	52.8	52.5	56.2	57.1
36	92201D5-2-80	62.9	54.4	57.1	58.9	59.3
37	T115	62.5	53.1	52.3	54.7	57.9
38	T116	62.0	53.8	55.6	54.7	58.6
39	AR839-27-1-3	62.1	51.4	56.8	55.0	58.3
40	AR656-5-1	61.6	52.1	55.0	54.6	57.1
LOCATION MEANS		62.2	53.5	54.4	56.4	58.3

TEST WEIGHT (lbs/bu)

		W.Lafayette IN	Woodburn IN	Lexington KY	Logan Co. KY	Clarksville MD
1	Caldwell	54.3	53	52.1	54.5	55.0
2	Foster	55.7	53	53.7	58.1	56.1
3	Patton	56.1	51	56.0	59.2	55.4
4	Roane	58.3	57	56.3	62.1	58.3
5	IL91-15911	54.4	53	52.3	57.1	55.9
6	VA97W-375	55.4	54	53.7	58.6	57.1
7	VA96W-247	53.1	51	55.5	56.6	57.7
8	T104	56.4	55	54.6	58.4	57.9
9	T106	55.3	47	52.9	53.8	56.3
10	IL94-6727	57.9	56	55.7	58.6	57.5
11	VA98W-586	56.5	54	54.4	58.6	58.0
12	VA98W-593	61.0	55	57.1	62.1	58.6
13	D6144	57.0	50	57.2	59.9	58.2
14	HTY93-72A	58.8	53	54.2	61.0	57.7
15	G65201	55.7	54	54.0	57.2	55.5
16	G53135	55.8	52	54.9	56.4	57.4
17	G53209	52.1	49	54.0	57.3	56.2
18	G60220	56.2	52	54.7	57.1	56.0
19	GA911316E45	56.7	55	52.7	55.7	56.3
20	GA91436E29	53.1	51	53.0	53.4	56.6
21	IL94-1653	57.4	55	55.3	58.6	58.4
22	IL95-947	54.8	53	53.3	59.0	55.8
23	KY89C-804-14-2	53.1	46	50.8	56.9	54.3
24	KY90C-292-4-1	55.0	53	53.3	59.2	55.9
25	KY90C-054-6	53.0	51	52.3	56.9	56.7
26	OH645	56.1	55	53.2	58.8	54.6
27	OH650	57.0	52	56.3	59.2	56.0
28	AW-M96-3609	53.3	53	50.8	53.5	55.0
29	AW-M96-3649	56.6	53	55.0	59.2	57.7
30	AW-M96-3706	55.3	48	54.1	58.6	57.1
31	B950346	54.4	52	55.0	57.9	58.2
32	B950770	56.5	53	55.5	61.2	58.7
33	B950799	53.4	48	52.4	55.7	56.0
34	88204RB1-2-1-6-70	56.1	49	55.5	59.5	56.8
35	92145E8-7-7-1-9	54.0	49	51.7	53.5	55.3
36	92201D5-2-80	58.0	56	58.2	57.9	57.5
37	T115	55.8	52	53.1	56.1	55.5
38	T116	57.7	52	54.0	58.5	58.5
39	AR839-27-1-3	57.6	55	55.7	60.3	56.2
40	AR656-5-1	56.5	49	54.5	57.8	56.0
LOCATION MEANS		55.8	52.2	54.2	57.9	56.7

TEST WEIGHT (lbs/bu)

		Len., Sag. MI	Columbia MO	Plymouth NC	Wooster OH	Nairn ON
1	Caldwell	57.7	56.3	55.7	50.8	58.4
2	Foster	58.5	56.0	53.4	54.8	58.8
3	Patton	57.8	55.3	56.7	54.1	59.2
4	Roane	60.4	58.6	58.6	56.6	61.7
5	IL91-15911	57.4	56.6	57.6	55.7	59.4
6	VA97W-375	57.9	54.3	55.5	55.3	59.3
7	VA96W-247	57.0	56.7	55.7	56.7	60.2
8	T104	57.2	56.6	56.5	55.2	59.2
9	T106	55.8	55.7	55.4	52.4	59.2
10	IL94-6727	59.7	57.2	58.8	55.6	60.6
11	VA98W-586	57.2	56.3	58.0	55.1	60.4
12	VA98W-593	61.2	58.4	59.8	58.7	61.1
13	D6144	58.0	57.1	56.4	56.7	59.6
14	HTY93-72A	58.3	57.3	57.5	56.6	60.6
15	G65201	58.1	56.4	56.7	52.4	58.7
16	G53135	56.3	55.6	55.9	54.6	58.8
17	G53209	57.6	56.2	56.4	53.5	58.9
18	G60220	58.8	56.8	57.9	55.7	59.3
19	GA911316E45	57.7	56.7	58.0	56.1	59.6
20	GA91436E29	56.4	54.7	58.0	54.5	60.1
21	IL94-1653	58.8	57.9	57.2	56.1	59.5
22	IL95-947	57.9	55.5	58.1	55.5	60.1
23	KY89C-804-14-2	56.4	55.0	53.8	53.1	58.2
24	KY90C-292-4-1	57.8	55.6	56.0	55.9	59.2
25	KY90C-054-6	57.4	55.6	55.1	54.5	58.6
26	OH645	58.8	56.1	57.9	56.2	60.5
27	OH650	57.5	52.7	56.5	54.9	60.1
28	AW-M96-3609	56.2	54.6	53.8	53.0	57.5
29	AW-M96-3649	57.1	55.6	55.1	56.5	58.8
30	AW-M96-3706	58.1	56.5	56.8	55.7	58.3
31	B950346	57.1	55.1	57.1	52.8	59.8
32	B950770	58.3	56.8	58.3	57.5	60.3
33	B950799	56.2	53.4	55.5	54.7	57.1
34	88204RB1-2-1-6-70	58.1	56.2	54.5	55.0	58.4
35	92145E8-7-7-1-9	54.9	54.2	53.7	52.8	56.7
36	92201D5-2-80	58.5	55.8	57.9	56.0	60.2
37	T115	55.7	54.6	55.2	53.0	58.4
38	T116	58.3	55.7	57.4	56.9	60.4
39	AR839-27-1-3	58.9	55.9	58.3	56.9	59.9
40	AR656-5-1	56.5	55.5	54.4	54.7	57.8
LOCATION MEANS		57.7	55.9	56.5	55.1	59.3

TEST WEIGHT (lbs/bu)

		Ridgetown ON	Univ.Park PA	Knoxville TN	Overton TX	Blacksburg VA
1	Caldwell	59.2	57.5	54.5	59	55.5
2	Foster	59.2	59.1	55.2	57	57.0
3	Patton	59.0	58.2	49.3	59	56.0
4	Roane	62.0	60.4	48.9	60	58.7
5	IL91-15911	59.4	59.3	57.0	55	55.7
6	VA97W-375	60.0	58.7	54.6	58	57.4
7	VA96W-247	60.1	58.7	58.0	57	56.4
8	T104	59.0	59.3	52.6	55	57.4
9	T106	59.4	57.9	50.2	49	56.9
10	IL94-6727	61.5	60.0	51.9	59	56.8
11	VA98W-586	61.2	59.4	50.0	60	56.9
12	VA98W-593	60.6	61.4	60.9	62	59.6
13	D6144	60.8	58.8	58.1	52	56.7
14	HTY93-72A	60.8	60.6	51.2	57	57.8
15	G65201	59.4	58.4	54.1	59	56.9
16	G53135	60.0	57.8	48.8	55	56.0
17	G53209	60.3	58.8	53.0	50	56.5
18	G60220	60.0	59.9	55.6	60	56.8
19	GA911316E45	59.7	59.8		59	56.5
20	GA91436E29	58.3	58.5	49.1	59	55.4
21	IL94-1653	60.6	60.6	58.1	58	58.0
22	IL95-947	60.3	59.8	47.6	52	55.0
23	KY89C-804-14-2	58.4	58.5	50.9	55	55.5
24	KY90C-292-4-1	60.4	59.0	57.8	57	56.7
25	KY90C-054-6	59.5	59.4	49.5	53	55.2
26	OH645	60.8	59.1	55.1	58	58.6
27	OH650	58.7	59.1	50.5	58	55.8
28	AW-M96-3609	59.4	57.5	55.3	57	53.6
29	AW-M96-3649	60.4	58.9	57.5	59	57.0
30	AW-M96-3706	60.0	58.7	58.3	55	56.0
31	B950346	60.8	59.6	57.3	60	57.8
32	B950770	61.8	60.2	58.9	57	58.6
33	B950799	58.1	57.7	50.2	47	55.4
34	88204RB1-2-1-6-70	59.4	58.8	56.7	48	56.8
35	92145E8-7-7-1-9	58.6	56.0	55.5	56	54.2
36	92201D5-2-80	60.8	60.0	51.7	58	56.7
37	T115	58.0	58.0	45.2	56	55.9
38	T116	60.1	59.8	56.2	59	56.7
39	AR839-27-1-3	61.2	59.6	58.6	60	56.9
40	AR656-5-1	59.8	58.0	56.7	53	55.8
LOCATION MEANS		59.9	59.0	53.9	56.4	56.6

TEST WEIGHT (lbs/bu)

		Arlington WI	ENTRY MEANS ALL LOCATIONS	rank
1	Caldwell	55.6	56.2	28
2	Foster	56.0	56.1	30
3	Patton	54.3	56.3	26
4	Roane	57.4	58.9	2
5	IL91-15911	54.4	56.4	24
6	VA97W-375	51.8	56.7	22
7	VA96W-247	55.4	56.8	19
8	T104	54.5	56.8	21
9	T106	54.6	55.2	35
10	IL94-6727	56.2	58.3	3
11	VA98W-586	55.8	57.4	11
12	VA98W-593	58.0	60.1	1
13	D6144	54.6	57.3	13
14	HTY93-72A	57.5	58.0	7
15	G65201	54.0	56.9	18
16	G53135	55.4	56.2	27
17	G53209	54.5	56.1	31
18	G60220	56.2	57.6	9
19	GA911316E45	53.9	57.2	15
20	GA91436E29	55.3	55.6	34
21	IL94-1653	56.8	58.1	5
22	IL95-947	51.3	56.3	25
23	KY89C-804-14-2	53.0	54.8	39
24	KY90C-292-4-1	54.8	57.0	16
25	KY90C-054-6	52.5	55.6	33
26	OH645	55.0	57.4	12
27	OH650	52.5	56.7	23
28	AW-M96-3609	53.9	55.2	36
29	AW-M96-3649	54.4	57.2	14
30	AW-M96-3706	56.5	56.8	20
31	B950346	54.3	56.9	17
32	B950770	55.0	58.2	4
33	B950799	51.5	54.8	40
34	88204RB1-2-1-6-70	55.2	55.8	32
35	92145E8-7-7-1-9	54.8	55.1	37
36	92201D5-2-80	55.1	58.0	6
37	T115	52.7	55.1	38
38	T116	54.5	57.5	10
39	AR839-27-1-3	55.9	58.0	8
40	AR656-5-1	54.0	56.2	29
LOCATION MEANS		54.7		

KERNEL WEIGHT (grams)

		Nairn ON	Ridgetown ON
		100 kw	100 kw
1	Caldwell	3.05	2.89
2	Foster	3.53	3.40
3	Patton	4.23	3.91
4	Roane	3.53	3.32
5	IL91-15911	3.63	3.10
6	VA97W-375	3.80	3.50
7	VA96W-247	4.00	3.84
8	T104	3.73	3.28
9	T106	3.50	3.25
10	IL94-6727	3.85	3.90
11	VA98W-586	3.70	3.70
12	VA98W-593	4.03	3.81
13	D6144	4.25	4.16
14	HTY93-72A	3.45	3.31
15	G65201	3.85	3.46
16	G53135	3.78	3.51
17	G53209	4.08	3.82
18	G60220	3.88	3.25
19	GA911316E45	3.40	3.38
20	GA91436E29	3.60	3.06
21	IL94-1653	3.68	3.64
22	IL95-947	3.50	3.54
23	KY89C-804-14-2	3.43	3.46
24	KY90C-292-4-1	3.65	3.43
25	KY90C-054-6	3.73	3.68
26	OH645	3.65	3.48
27	OH650	4.33	3.87
28	AW-M96-3609	3.48	3.49
29	AW-M96-3649	3.60	3.39
30	AW-M96-3706	3.33	3.55
31	B950346	3.70	3.73
32	B950770	3.60	3.57
33	B950799	4.00	3.76
34	88204RB1-2-1-6-70	3.05	3.03
35	92145E8-7-7-1-9	3.40	3.36
36	92201D5-2-80	3.68	3.68
37	T115	3.23	3.12
38	T116	3.38	3.33
39	AR839-27-1-3	3.78	3.75
40	AR656-5-1	3.63	3.82
LOCATION MEANS		3.67	3.51

HEADING DATE (Julian)

		Bay AR	Keiser AR	Univ of Del DE	Marianna FL	Griffin GA
1	Caldwell	110	109	129	107	106
2	Foster	109	109		104	104
3	Patton	108	107	128	97	101
4	Roane	110	109	130	105	103
5	IL91-15911	111	112		108	106
6	VA97W-375	107	107		105	102
7	VA96W-247	109	108	129	104	103
8	T104	108	108		90	95
9	T106	102	109		87	97
10	IL94-6727	113	115		108	106
11	VA98W-586	108	108	129	89	97
12	VA98W-593	108	107	129	92	98
13	D6144	112	113	131	95	107
14	HTY93-72A	110	109	129	95	99
15	G65201	108	106	128	96	101
16	G53135	106	106	127	101	99
17	G53209	109	108	131	103	103
18	G60220	108	107	131	95	101
19	GA911316E45	107	105	129	92	98
20	GA91436E29	107	104	129	93	100
21	IL94-1653	112	113	131	108	107
22	IL95-947	111	114	131	108	120
23	KY89C-804-14-2	108	109	130	95	101
24	KY90C-292-4-1	108	109	129	94	104
25	KY90C-054-6	110	113	131	97	102
26	OH645	112	112	133	105	105
27	OH650	109	110	130	105	103
28	AW-M96-3609	110	112	131	104	103
29	AW-M96-3649	109	110	130	101	101
30	AW-M96-3706	113	115	132	109	105
31	B950346	108	109	128	100	101
32	B950770	106	108	129	104	101
33	B950799	109	109	129	104	102
34	88204RB1-2-1-6-70	114	117	132	95	105
35	92145E8-7-7-1-9	108	108	128	97	96
36	92201D5-2-80	110	109	129	105	104
37	T115	107	108	129	87	97
38	T116	102	105	131	85	91
39	AR839-27-1-3	112	112	132	97	105
40	AR656-5-1	111	110	131	92	102
LOCATION MEANS		109.0	109.5	129.9	99.0	102.0

HEADING DATE (Julian)

		Aberdeen ID	Urbana IL	Greensburg IN	W.Lafayette IN	Manhattan KS
1	Caldwell	142.3	131.0	129	130.0	126.0
2	Foster	143.3	134.0	130	131.5	126.5
3	Patton	143.0	131.0	129	130.0	126.0
4	Roane	144.3	132.7	131	130.5	126.0
5	IL91-15911	144.0	134.0	132	131.5	127.5
6	VA97W-375	144.3	131.7	133	129.0	125.5
7	VA96W-247	144.5	132.7	132	129.5	126.0
8	T104	144.5	131.7	131	131.0	126.0
9	T106	143.8	130.7	131	131.0	126.0
10	IL94-6727	145.5	134.7	131	132.0	128.0
11	VA98W-586	143.5	130.0	131	130.5	125.5
12	VA98W-593	143.0	130.7	131	129.0	125.5
13	D6144	140.0	130.7	133	130.0	125.5
14	HTY93-72A	144.5	132.3	132	130.5	126.0
15	G65201	143.3	131.3	130	130.0	125.5
16	G53135	142.3	129.7	128	128.5	123.5
17	G53209	143.0	131.3	130	131.0	125.5
18	G60220	143.0	131.0	129	129.5	125.5
19	GA911316E45	144.0	131.3	129	130.5	125.5
20	GA91436E29	145.0	131.0	131	131.5	126.0
21	IL94-1653	144.8	133.0	131	131.0	126.0
22	IL95-947	145.3	133.7	132	131.0	126.5
23	KY89C-804-14-2	144.8	133.0	130	131.0	126.0
24	KY90C-292-4-1	144.5	131.0	130	129.5	125.0
25	KY90C-054-6	145.5	133.0	131	131.0	126.0
26	OH645	146.0	133.3	131	132.0	127.0
27	OH650	145.5	133.0	132	131.5	126.0
28	AW-M96-3609	143.8	133.7	133	131.5	126.0
29	AW-M96-3649	143.5	131.7	130	130.0	126.0
30	AW-M96-3706	145.0	135.3	132	132.0	127.5
31	B950346	145.3	132.7	132	130.5	125.5
32	B950770	144.0	132.0	129	129.5	124.0
33	B950799	143.3	131.0	129	130.0	125.5
34	88204RB1-2-1-6-70	141.3	131.0	129	131.0	126.5
35	92145E8-7-7-1-9	142.8	130.0	128	128.0	125.0
36	92201D5-2-80	143.3	131.0	129	129.0	125.5
37	T115	143.5	128.3	128	130.0	125.0
38	T116	144.5	127.3	128	129.0	126.0
39	AR839-27-1-3	147.5	136.0	133	133.0	128.5
40	AR656-5-1	146.0	134.0	133	132.0	126.0
LOCATION MEANS		144.0	131.9	130.6	130.5	125.9

HEADING DATE (Julian)

		Wichita KS	Lexington KY	Clarksville MD	Columbia MO	Lincoln NE
1	Caldwell	120	127	129.7	126.3	129
2	Foster	120	127	130.0	126.3	130
3	Patton	119	125	128.7	124.7	130
4	Roane	120	126	130.0	127.0	128
5	IL91-15911	121	129	130.0	127.7	129
6	VA97W-375	116	125	128.3	125.3	129
7	VA96W-247	119	126	129.7	124.7	130
8	T104	119	126	129.0	126.7	130
9	T106	120	127	129.7	126.7	130
10	IL94-6727	121	130	132.3	127.0	130
11	VA98W-586	119	128	129.7	127.0	130
12	VA98W-593	119	126	129.0	124.3	128
13	D6144	119	129	129.0	124.7	129
14	HTY93-72A	120	127	130.0	127.3	130
15	G65201	119	126	129.0	125.0	129
16	G53135	117	123	128.0	123.0	128
17	G53209	119	126	129.0	125.7	129
18	G60220	119	126	129.7	124.3	130
19	GA911316E45	118	126	128.7	124.7	130
20	GA91436E29	119	126	129.3	127.0	130
21	IL94-1653	119	127	130.3	127.0	130
22	IL95-947	120	128	131.3	127.3	130
23	KY89C-804-14-2	119	126	129.7	125.7	129
24	KY90C-292-4-1	118	127	129.0	126.3	129
25	KY90C-054-6	120	128	130.0	127.7	129
26	OH645	120	128	131.3	127.0	130
27	OH650	121	126	129.3	126.7	130
28	AW-M96-3609	120	127	129.7	127.0	128
29	AW-M96-3649	118	126	129.7	126.0	128
30	AW-M96-3706	121	130	132.7	127.7	130
31	B950346	119	126	129.3	125.3	130
32	B950770	117	126	128.7	124.3	128
33	B950799	119	126	128.7	124.7	129
34	88204RB1-2-1-6-70	119	131	129.7	126.7	130
35	92145E8-7-7-1-9	118	125	129.0	124.3	130
36	92201D5-2-80	119	125	129.0	124.3	128
37	T115	119	126	128.7	125.3	130
38	T116	120	126	127.3	124.3	130
39	AR839-27-1-3	121	131	133.0	129.3	131
40	AR656-5-1	121	128	130.0	127.7	130
LOCATION MEANS		119.3	126.9	129.6	126.0	129.4

HEADING DATE (Julian)

		Ithaca NY	Smithville OH	Wooster OH	Nairn ON	Ridgetown ON
1	Caldwell	152	137	135.3	192.0	146
2	Foster	151	139	136.0	190.5	145
3	Patton	150	131	133.3	190.0	145
4	Roane	153	138	135.3	190.0	148
5	IL91-15911	154	139	136.3	191.0	147
6	VA97W-375	152	136	133.0	190.5	145
7	VA96W-247	152	136	134.0	190.5	148
8	T104	152	135	134.3	191.0	146
9	T106	154	135	136.0	191.0	146
10	IL94-6727	154	140	137.3	191.5	148
11	VA98W-586	154	136	134.0	192.0	148
12	VA98W-593	152	134	134.0	191.0	146
13	D6144	150	136	135.3	190.0	144
14	HTY93-72A	152	136	134.7	190.5	146
15	G65201	151	134	134.3	192.5	144
16	G53135	150	131	131.0	192.0	143
17	G53209	152	136	134.3	192.0	145
18	G60220	152	136	133.7	191.5	146
19	GA911316E45	152	135	134.3	190.0	146
20	GA91436E29	154	134	133.3	191.5	146
21	IL94-1653	152	136	135.7	191.0	146
22	IL95-947	152	140	136.0	191.5	146
23	KY89C-804-14-2	153	136	135.7	191.0	148
24	KY90C-292-4-1	151	131	133.7	190.0	145
25	KY90C-054-6	154	136	136.0	193.0	147
26	OH645	152	136	136.3	191.0	149
27	OH650	153	136	135.7	191.0	147
28	AW-M96-3609	152	136	134.0	190.5	146
29	AW-M96-3649	152	134	133.7	190.0	147
30	AW-M96-3706	153	139	135.7	190.5	148
31	B950346	153	136	134.7	190.5	146
32	B950770	151	136	132.7	190.0	145
33	B950799	152	131	132.7	190.0	144
34	88204RB1-2-1-6-70	151	136	136.3	191.0	146
35	92145E8-7-7-1-9	150	131	132.7	190.0	145
36	92201D5-2-80	151	136	133.7	190.5	146
37	T115	152	133	133.7	190.5	146
38	T116	152	137	132.0	190.0	147
39	AR839-27-1-3	156	139	136.7	190.5	150
40	AR656-5-1	153	140	136.0	194.0	150
LOCATION MEANS		152.2	135.7	134.6	190.9	146.3

HEADING DATE (Julian)

		Univ.Park PA	Knoxville TN	Overton TX	Blacksburg VA	ENTRY MEANS ALL LOCATIONS	
							rank
1	Caldwell	136	120	92	126	128.6	28
2	Foster	136	120	92	126	128.7	29
3	Patton	134	117	86	125	126.6	8
4	Roane	136	120	87	126	128.6	26
5	IL91-15911	136	122	93	126	129.9	35
6	VA97W-375	134	117	87	125	127.3	18
7	VA96W-247	135	118	82	125	127.8	20
8	T104	135	119	80	125	126.7	9
9	T106	138	117	79	124	126.6	7
10	IL94-6727	139	122	92	127	130.6	38
11	VA98W-586	136	115	80	123	126.8	10
12	VA98W-593	134	117	81	125	126.4	6
13	D6144	136	120	94	123	128.2	25
14	HTY93-72A	136	120	88	125	127.9	22
15	G65201	135	118	87	125	127.0	14
16	G53135	133	116	87	123	125.7	2
17	G53209	135	118	93	125	128.1	24
18	G60220	134	118	87	125	127.2	16
19	GA911316E45	134	114	81	124	126.2	5
20	GA91436E29	136	114	82	124	126.8	11
21	IL94-1653	137	120	88	127	129.3	34
22	IL95-947	138	122	94	128	130.7	39
23	KY89C-804-14-2	138	119	87	125	127.9	23
24	KY90C-292-4-1	136	116	86	125	127.0	12
25	KY90C-054-6	139	119	93	126	129.1	32
26	OH645	139	122	93	127	129.9	36
27	OH650	138	118	88	126	128.8	30
28	AW-M96-3609	136	120	88	125	128.6	27
29	AW-M96-3649	135	116	82	125	127.3	17
30	AW-M96-3706	140	122	95	128	130.8	40
31	B950346	137	118	87	125	127.9	21
32	B950770	134	117	86	125	127.0	13
33	B950799	134	117	87	124	127.1	15
34	88204RB1-2-1-6-70	136	121	94	123	128.9	31
35	92145E8-7-7-1-9	133	117	86	124	126.1	4
36	92201D5-2-80	135	120	87	126	127.7	19
37	T115	136	116	79	123	125.9	3
38	T116	134	114	78	121	125.1	1
39	AR839-27-1-3	141	123	88	128	130.6	37
40	AR656-5-1	139	120	87	126	129.1	33
LOCATION MEANS		136.1	118.5	87.1	125.1		

HEIGHT (inches)

		Bay AR	Keiser AR	Univ of Del DE	Marianna FL	Aberdeen ID
1	Caldwell	39	34	37	40.0	39.5
2	Foster	40	38		35.5	36.3
3	Patton	39	38	38	37.0	38.5
4	Roane	37	36	32	34.0	35.3
5	IL91-15911	40	39		38.5	39.3
6	VA97W-375	36	35		32.5	35.5
7	VA96W-247	37	33	34	34.5	35.8
8	T104	38	35		35.5	38.5
9	T106	34	33		37.5	37.3
10	IL94-6727	40	40		36.5	41.0
11	VA98W-586	37	35	33	34.0	35.5
12	VA98W-593	37	33	33	32.5	34.8
13	D6144	42	36	38	39.0	38.5
14	HTY93-72A	42	38	39	38.0	41.5
15	G65201	41	41	38	38.5	40.8
16	G53135	36	35	34	36.5	36.0
17	G53209	39	38	36	38.5	37.8
18	G60220	42	42	40	40.0	41.0
19	GA911316E45	36	33	34	33.0	34.5
20	GA91436E29	37	33	33	35.0	33.5
21	IL94-1653	41	35	35	39.0	48.3
22	IL95-947	41	39	37	39.5	41.8
23	KY89C-804-14-2	38	36	36	36.5	39.0
24	KY90C-292-4-1	37	33	35	37.0	37.8
25	KY90C-054-6	41	38	37	37.5	41.0
26	OH645	41	36	33	38.0	38.3
27	OH650	40	35	39	35.5	39.5
28	AW-M96-3609	38	35	32	33.0	38.5
29	AW-M96-3649	38	36	37	36.5	37.5
30	AW-M96-3706	39	34	35	33.0	36.5
31	B950346	39	33	35	35.5	39.0
32	B950770	37	33	34	36.0	37.3
33	B950799	40	35	37	36.5	39.0
34	88204RB1-2-1-6-70	38	36	37	36.0	39.0
35	92145E8-7-7-1-9	37	30	29	33.5	33.3
36	92201D5-2-80	38	33	34	36.5	34.5
37	T115	37	33	32	34.0	36.0
38	T116	34	28	30	30.0	33.3
39	AR839-27-1-3	43	38	36	35.5	39.5
40	AR656-5-1	39	35	35	38.0	37.5
LOCATION MEANS		38.6	35.4	35.1	36.1	37.9

HEIGHT (inches)

		Brownstown IL	Greensburg IN	W.Lafayette IN	Woodburn IN	Manhattan KS
1	Caldwell	40.0	38	34.8	39.5	41.8
2	Foster	41.0	43	34.8	38.5	41.4
3	Patton	42.5	42	34.3	39.5	41.4
4	Roane	38.5	38	32.8	34.0	37.8
5	IL91-15911	40.5	42	35.5	41.5	42.2
6	VA97W-375	37.0	37	30.5	34.0	40.6
7	VA96W-247	38.0	37	32.0	36.0	38.2
8	T104	36.5	37	34.8	38.0	39.4
9	T106	38.0	37	33.3	37.0	35.5
10	IL94-6727	40.5	40	36.3	40.0	36.6
11	VA98W-586	39.5	39	32.5	34.5	37.4
12	VA98W-593	38.5	39	32.8	34.0	37.0
13	D6144	44.5	46	36.8	37.5	45.3
14	HTY93-72A	43.0	45	39.5	39.5	43.3
15	G65201	42.0	42	37.5	39.0	43.3
16	G53135	38.0	38	32.3	34.5	34.7
17	G53209	41.0	40	35.5	38.5	39.4
18	G60220	45.0	43	37.0	39.5	45.3
19	GA911316E45	37.5	37	30.0	33.0	38.2
20	GA91436E29	35.5	37	31.5	35.5	36.6
21	IL94-1653	43.5	43	37.8	41.0	45.3
22	IL95-947	43.0	45	36.3	42.5	43.3
23	KY89C-804-14-2	41.5	45	32.5	38.5	39.4
24	KY90C-292-4-1	39.5	43	31.3	35.5	42.6
25	KY90C-054-6	45.0	42	35.0	41.0	42.2
26	OH645	41.0	45	39.5	38.5	37.4
27	OH650	41.0	40	32.5	35.5	41.4
28	AW-M96-3609	38.5	42	33.5	37.0	42.6
29	AW-M96-3649	39.5	41	36.8	39.0	43.3
30	AW-M96-3706	41.0	43	35.8	39.0	41.4
31	B950346	41.5	42	34.5	38.0	38.2
32	B950770	40.5	41	32.3	35.5	37.4
33	B950799	41.5	44	33.5	37.0	43.3
34	88204RB1-2-1-6-70	40.5	45	38.0	39.5	42.9
35	92145E8-7-7-1-9	36.5	35	33.5	32.5	36.6
36	92201D5-2-80	37.5	39	35.5	34.5	38.2
37	T115	37.5	37	33.8	35.5	40.2
38	T116	33.0	32	29.3	31.5	34.7
39	AR839-27-1-3	44.0	44	38.8	40.0	42.6
40	AR656-5-1	40.0	39	35.8	38.0	42.2
LOCATION MEANS		40.1	40.6	34.5	37.3	40.3

HEIGHT (inches)

		Wichita KS	Lexington KY	Logan Co. KY	Clarksville MD	Len., Sag. MI
1	Caldwell	38	35	38	40.3	40
2	Foster	34	36	39	39.8	39
3	Patton	37	39	43	41.7	40
4	Roane	33	32	31	36.7	37
5	IL91-15911	42	38	42	41.7	41
6	VA97W-375	33	33	33	39.3	35
7	VA96W-247	34	35	38	38.0	37
8	T104	38	34	36	37.8	36
9	T106	33	32	37	38.0	35
10	IL94-6727	37	37	41	40.7	40
11	VA98W-586	34	33	34	35.8	34
12	VA98W-593	32	34	34	36.0	35
13	D6144	38	42	45	42.8	40
14	HTY93-72A	40	37	42	42.0	41
15	G65201	40	36	39	41.8	42
16	G53135	34	34	35	37.0	37
17	G53209	38	35	38	41.2	41
18	G60220	40	36	39	40.5	42
19	GA911316E45	34	32	32	37.5	33
20	GA91436E29	34	31	34	38.3	34
21	IL94-1653	38	38	43	38.2	43
22	IL95-947	40	37	42	40.8	42
23	KY89C-804-14-2	37	35	38	40.3	40
24	KY90C-292-4-1	34	36	36	38.3	37
25	KY90C-054-6	40	39	42	43.8	43
26	OH645	36	36	40	39.7	41
27	OH650	32	39	40	34.5	42
28	AW-M96-3609	34	33	36	38.8	37
29	AW-M96-3649	37	38	39	41.0	38
30	AW-M96-3706	37	34	37	38.0	40
31	B950346	37	34	40	34.2	37
32	B950770	36	35	36	38.8	35
33	B950799	37	37	38	39.3	38
34	88204RB1-2-1-6-70	36	37	41	39.7	40
35	92145E8-7-7-1-9	30	33	35	35.5	36
36	92201D5-2-80	36	35	33	36.3	37
37	T115	37	34	35	37.2	34
38	T116	30	30	31	34.2	29
39	AR839-27-1-3	36	38	43	37.8	41
40	AR656-5-1	36	38	35	32.8	39
LOCATION MEANS		36.0	35.4	37.8	38.7	38.2

HEIGHT (inches)

		Columbia MO	Ithaca NY	Smithville OH	Wooster OH	Nairn ON
1	Caldwell	39.0	35.4	42	40.6	37.4
2	Foster	38.3	35.4	42	41.3	35.8
3	Patton	39.3	37.4	36	38.1	36.6
4	Roane	35.0	31.5	42	35.6	31.9
5	IL91-15911	42.3	39.4	35	44.0	37.8
6	VA97W-375	34.3	31.5	38	36.8	31.7
7	VA96W-247	34.0	33.5	36	36.1	33.3
8	T104	35.7	33.5	35	37.2	32.9
9	T106	36.7	31.5	38	39.1	34.1
10	IL94-6727	41.7	37.4	37	4.1	37.4
11	VA98W-586	35.3	33.5	36	36.9	33.9
12	VA98W-593	33.7	33.5	42	35.9	33.7
13	D6144	41.3	39.4	42	40.3	37.6
14	HTY93-72A	41.3	37.4	40	42.0	37.2
15	G65201	40.0	35.4	38	42.9	39.4
16	G53135	37.3	33.5	39	40.2	34.6
17	G53209	38.7	37.4	41	41.9	36.8
18	G60220	42.7	37.4	34	42.8	37.6
19	GA911316E45	34.3	35.4	30	37.8	33.5
20	GA91436E29	34.3	33.5	41	36.9	34.3
21	IL94-1653	41.3	37.4	42	41.9	37.4
22	IL95-947	43.7	37.4	40	42.0	37.2
23	KY89C-804-14-2	38.0	37.4	34	40.6	37.0
24	KY90C-292-4-1	36.7	33.5	42	39.1	34.6
25	KY90C-054-6	40.7	39.4	42	42.9	40.0
26	OH645	38.7	35.4	40	40.1	37.4
27	OH650	39.0	37.4	36	40.6	19.9
28	AW-M96-3609	36.7	31.5	38	38.5	32.9
29	AW-M96-3649	38.3	35.4	38	40.6	35.8
30	AW-M96-3706	39.0	35.4	39	39.7	34.6
31	B950346	35.3	37.4	36	39.5	36.2
32	B950770	36.0	33.5	37	37.8	34.4
33	B950799	39.7	35.4	41	37.9	36.8
34	88204RB1-2-1-6-70	39.3	33.5	38	40.6	34.3
35	92145E8-7-7-1-9	34.3	31.5	37	34.9	28.9
36	92201D5-2-80	35.0	35.4	34	37.7	33.3
37	T115	34.7	33.5	30	36.4	32.9
38	T116	31.3	27.6	40	32.6	29.9
39	AR839-27-1-3	42.7	39.4	38	43.6	37.6
40	AR656-5-1	38.0	35.4	42	42.2	33.9
LOCATION MEANS		37.8	35.1	38.2	38.5	34.8

HEIGHT (inches)

		Ridgetown ON	Univ.Park PA	Overton TX	Blacksburg VA	Arlington WI
1	Caldwell	40	36	38	34	40.0
2	Foster	40	34	37	36	39.5
3	Patton	40	33	39	36	38.0
4	Roane	37	31	33	32	37.5
5	IL91-15911	43	38	42	37	40.5
6	VA97W-375	35	31	35	32	35.5
7	VA96W-247	37	32	34	33	34.5
8	T104	37	33	34	33	42.0
9	T106	38	32	32	34	37.0
10	IL94-6727	42	35	41	35	37.5
11	VA98W-586	37	31	34	34	37.0
12	VA98W-593	37	30	36	32	36.0
13	D6144	41	35	34	38	37.0
14	HTY93-72A	42	37	40	37	42.5
15	G65201	42	35	42	36	43.5
16	G53135	37	30	34	33	35.0
17	G53209	42	33	37	33	40.0
18	G60220	42	34	41	38	39.5
19	GA911316E45	38	32	34	31	37.5
20	GA91436E29	38	32	34	33	37.0
21	IL94-1653	42	37	41	37	41.5
22	IL95-947	42	36	41	36	43.0
23	KY89C-804-14-2	41	34	38	35	40.5
24	KY90C-292-4-1	39	32	31	35	41.0
25	KY90C-054-6	44	39	36	37	41.5
26	OH645	40	35	38	37	43.5
27	OH650	40	32	34	36	39.0
28	AW-M96-3609	38	32	34	34	36.5
29	AW-M96-3649	41	33	37	35	40.5
30	AW-M96-3706	39	33	36	32	36.5
31	B950346	40	35	36	34	40.5
32	B950770	38	32	33	34	38.0
33	B950799	40	35	33	37	41.5
34	88204RB1-2-1-6-70	40	33	39	34	36.5
35	92145E8-7-7-1-9	34	27	30	32	35.0
36	92201D5-2-80	37	33	34	34	37.0
37	T115	37	32	34	33	37.0
38	T116	33	28	29	30	34.5
39	AR839-27-1-3	42	33	42	37	41.0
40	AR656-5-1	40	33	35	36	38.5
LOCATION MEANS		39.3	33.2	36.1	34.6	38.8

HEIGHT (inches)

ENTRY MEANS ALL LOCATIONS

			rank
1	Caldwell	38.3	13
2	Foster	38.1	15
3	Patton	38.6	11
4	Roane	34.9	36
5	IL91-15911	40.1	5
6	VA97W-375	34.7	37
7	VA96W-247	35.2	31
8	T104	36.2	25
9	T106	35.4	30
10	IL94-6727	37.3	20
11	VA98W-586	35.1	32
12	VA98W-593	34.9	35
13	D6144	39.9	7
14	HTY93-72A	40.3	4
15	G65201	39.8	8
16	G53135	35.4	29
17	G53209	38.3	12
18	G60220	40.1	6
19	GA911316E45	34.3	38
20	GA91436E29	34.9	34
21	IL94-1653	40.3	3
22	IL95-947	40.3	2
23	KY89C-804-14-2	37.9	18
24	KY90C-292-4-1	36.7	24
25	KY90C-054-6	40.4	1
26	OH645	38.6	10
27	OH650	36.8	23
28	AW-M96-3609	36.0	26
29	AW-M96-3649	38.1	17
30	AW-M96-3706	37.1	21
31	B950346	37.1	22
32	B950770	35.9	27
33	B950799	38.1	16
34	88204RB1-2-1-6-70	38.1	14
35	92145E8-7-7-1-9	33.2	39
36	92201D5-2-80	35.5	28
37	T115	34.9	33
38	T116	31.4	40
39	AR839-27-1-3	39.7	9
40	AR656-5-1	37.4	19

LOCATION MEANS

LODGING

		Keiser AR	Univ of Del DE	Marianna FL	Aberdeen ID	Urbana IL
		0-9	0-9	0-9	0-9	1-9
1	Caldwell	0	2.3	0.0	0.5	1.0
2	Foster	0		0.0	0.0	3.3
3	Patton	0	1.3	0.5	0.0	3.7
4	Roane	0	1.7	0.5	3.3	2.0
5	IL91-15911	0		1.0	0.0	2.0
6	VA97W-375	0		0.5	0.0	6.0
7	VA96W-247	2	2.0	1.5	1.3	4.3
8	T104	0		1.0	0.0	1.0
9	T106	0		1.0	0.0	1.0
10	IL94-6727	0		0.0	0.0	1.0
11	VA98W-586	0	1.0	2.5	0.0	2.3
12	VA98W-593	0	1.3	1.0	0.0	1.3
13	D6144	0	1.3	1.5	0.0	2.7
14	HTY93-72A	0	2.3	0.5	1.0	1.7
15	G65201	0	1.7	0.5	0.0	1.0
16	G53135	0	2.0	1.0	0.0	1.0
17	G53209	0	2.0	1.0	0.0	1.0
18	G60220	0	2.3	0.5	0.0	1.0
19	GA911316E45	8	2.3	6.0	4.0	7.7
20	GA91436E29	5	2.0	3.0	0.5	4.7
21	IL94-1653	0	2.0	0.5	0.0	4.7
22	IL95-947	0	1.6	0.0	1.5	1.3
23	KY89C-804-14-2	8	2.0	1.0	2.8	3.0
24	KY90C-292-4-1	0	1.0	0.0	0.0	2.0
25	KY90C-054-6	0	2.0	0.5	2.3	3.0
26	OH645	0	1.0	0.0	0.0	1.0
27	OH650	0	1.0	1.0	0.0	4.7
28	AW-M96-3609	0	1.7	0.0	0.0	1.0
29	AW-M96-3649	0	2.7	1.0	0.0	1.0
30	AW-M96-3706	3	1.7	0.0	0.0	1.0
31	B950346	2	2.0	0.0	1.5	5.7
32	B950770	2	2.0	0.5	0.0	4.3
33	B950799	3	1.7	2.0	0.0	6.0
34	88204RB1-2-1-6-70	0	2.7	0.0	0.0	1.0
35	92145E8-7-7-1-9	0	1.0	0.0	0.0	1.0
36	92201D5-2-80	0	1.0	0.0	0.0	1.0
37	T115	0	1.3	2.5	0.0	1.7
38	T116	0	1.3	1.5	0.0	1.0
39	AR839-27-1-3	0	1.0	0.0	0.0	1.0
40	AR656-5-1	0	1.0	0.0	0.0	2.3
LOCATION MEANS		0.8	1.7	0.9	0.5	2.4

LODGING

		Greensburg IN	Lafayette IN	W.Lafayette IN	Woodburn IN	Wichita KS
		0-9	0-9	0-9	0-9	0-9
1	Caldwell	3.0	2	6	3.7	2
2	Foster	1.0	2	5	1.7	2
3	Patton	1.7	1	8	4.3	2
4	Roane	1.3	4	5	4.3	2
5	IL91-15911	1.7	1	6	6.3	3
6	VA97W-375	1.3	2	8	2.3	2
7	VA96W-247	1.0	3	7	5.7	3
8	T104	1.0	1	3	1.0	2
9	T106	1.0	1	3	1.0	2
10	IL94-6727	1.3	1	4	3.3	1
11	VA98W-586	2.7	2	5	3.7	3
12	VA98W-593	5.0	1	3	5.0	5
13	D6144	3.0	3	7	4.0	1
14	HTY93-72A	2.5	2	4	3.3	3
15	G65201	1.7	1	4	2.3	3
16	G53135	1.0	1	3	3.3	1
17	G53209	2.3	2	8	5.0	3
18	G60220	1.0	1	8	4.3	2
19	GA911316E45	4.0	6	9	7.7	4
20	GA91436E29	3.3	5	8	7.0	2
21	IL94-1653	1.7	5	7	4.7	2
22	IL95-947	1.0	5	8	5.0	3
23	KY89C-804-14-2	1.0	3	8	5.7	3
24	KY90C-292-4-1	2.7	2	7	1.7	1
25	KY90C-054-6	1.3	2	6	4.0	2
26	OH645	1.0	1	4	1.3	1
27	OH650	2.7	1	6	2.0	1
28	AW-M96-3609	1.0	1	3	1.7	1
29	AW-M96-3649	1.0	1	4	4.7	2
30	AW-M96-3706	1.7	2	4	4.7	2
31	B950346	2.8	4	7	6.0	2
32	B950770	2.0	2	6	8.0	3
33	B950799	2.7	6	8	8.0	2
34	88204RB1-2-1-6-70	1.0	1	4	6.3	1
35	92145E8-7-7-1-9	1.0	1	3	0.7	1
36	92201D5-2-80	1.0	2	3	1.0	2
37	T115	1.7	2	3	1.7	3
38	T116	1.0	2	3	1.7	2
39	AR839-27-1-3	1.0	2	5	1.0	2
40	AR656-5-1	1.0	1	3	2.0	1
LOCATION MEANS		1.8	2.2	5.4	3.8	2.1

LODGING

		Lexington KY	Clarksville MD	Len., Sag. MI	Columbia MO	Ithaca NY
		%	0-9	0-9	0-9	0-9
1	Caldwell	0	4.3	3	1.0	0
2	Foster	0	0.7	2	0.7	0
3	Patton	0	2.7	2	0.0	0
4	Roane	0	4.0	7	0.3	0
5	IL91-15911	0	5.0	9	1.7	0
6	VA97W-375	0	1.0	3	0.3	0
7	VA96W-247	0	2.7	8	1.0	0
8	T104	0	0.3	1	0.0	0
9	T106	0	3.0	0	0.3	0
10	IL94-6727	20	3.3	4	0.0	0
11	VA98W-586	0	4.7	3	1.0	0
12	VA98W-593	0	6.7	5	0.0	0
13	D6144	0	5.3	1	0.3	0
14	HTY93-72A	0	0.7	6	0.0	0
15	G65201	0	1.7	5	0.0	0
16	G53135	0	0.3	4	1.0	0
17	G53209	0	1.7	5	1.0	0
18	G60220	0	0.0	5	1.0	0
19	GA911316E45	65	9.3	5	1.7	0
20	GA91436E29	3	3.0	6	2.0	0
21	IL94-1653	0	3.3	4	1.0	0
22	IL95-947	0	4.3	4	1.0	0
23	KY89C-804-14-2	0	2.7	6	0.3	0
24	KY90C-292-4-1	13	7.3	1	0.0	0
25	KY90C-054-6	0	2.3	3	1.3	0
26	OH645	0	3.7	1	0.0	0
27	OH650	0	6.0	1	0.0	0
28	AW-M96-3609	0	0.0	2	0.3	0
29	AW-M96-3649	0	2.7	5	0.3	0
30	AW-M96-3706	0	3.3	2	1.3	0
31	B950346	0	1.3	8	0.7	0
32	B950770	7	2.3	6	0.3	0
33	B950799	7	4.0	9	0.0	0
34	88204RB1-2-1-6-70	0	2.0	2	0.0	0
35	92145E8-7-7-1-9	0	0.0	1	0.0	0
36	92201D5-2-80	0	1.7	1	0.0	0
37	T115	0	0.0	2	0.7	0
38	T116	0	0.3	2	0.7	0
39	AR839-27-1-3	0	2.7	2	0.0	0
40	AR656-5-1	0	1.3	1	0.0	0
LOCATION MEANS		2.9	2.8	3.7	0.5	0.0

LODGING

		Smithville OH	Wooster OH	Nairn ON	Ridgetown ON	Knoxville TN
		0-9	1-5	0-9	0-9	0-9
1	Caldwell	9	1.3	1.0	0.0	1
2	Foster	9	1.0	0.5	0.0	0
3	Patton	9	1.0	0.5	1.2	0
4	Roane	9	2.3	0.0	1.2	0
5	IL91-15911	9	1.7	1.0	3.8	1
6	VA97W-375	9	1.7	0.0	2.2	0
7	VA96W-247	9	1.7	0.0	2.8	0
8	T104	8	1.3	0.0	0.0	0
9	T106	9	1.0	0.0	0.0	0
10	IL94-6727	9	1.0	0.0	1.0	0
11	VA98W-586	9	1.0	0.0	4.5	0
12	VA98W-593	9	1.0	2.0	1.5	0
13	D6144	7	1.0	1.5	0.5	1
14	HTY93-72A	7	1.0	1.0	0.0	0
15	G65201	8	1.0	1.0	0.0	0
16	G53135	9	1.0	2.0	1.0	0
17	G53209	9	1.0	1.0	0.5	0
18	G60220	1	1.0	1.0	0.5	0
19	GA911316E45	9	3.0	2.0	3.5	1
20	GA91436E29	9	2.0	3.0	3.0	1
21	IL94-1653	9	2.0	2.0	1.8	0
22	IL95-947	9	1.7	1.0	2.5	0
23	KY89C-804-14-2	9	2.7	1.0	1.0	0
24	KY90C-292-4-1	9	1.3	0.0	0.2	0
25	KY90C-054-6	9	2.0	0.0	0.5	0
26	OH645	1	1.0	0.0	0.0	0
27	OH650	2	1.0	0.5	0.0	0
28	AW-M96-3609	9	1.0	0.5	0.0	0
29	AW-M96-3649	8	1.0	0.0	0.2	0
30	AW-M96-3706	9	1.3	1.0	0.0	0
31	B950346	9	2.3	1.5	3.0	0
32	B950770	9	1.3	1.5	5.5	0
33	B950799	9	1.3	1.0	4.2	0
34	88204RB1-2-1-6-70	9	1.0	0.0	0.0	0
35	92145E8-7-7-1-9	7	1.0	0.0	0.0	0
36	92201D5-2-80	9	1.0	0.0	0.0	0
37	T115	9	1.0	0.0	0.0	0
38	T116	6	1.0	1.0	1.2	0
39	AR839-27-1-3	5	1.0	0.5	0.0	0
40	AR656-5-1	2	1.0	0.0	0.0	0
LOCATION MEANS		7.9	1.3	0.7	1.2	0.1

LODGING

		Overton TX	Blacksburg VA	Arlington WI
		%	0.2-10	0-9
1	Caldwell	0	3.0	1.0
2	Foster	0	1.9	1.0
3	Patton	0	0.2	1.0
4	Roane	0	0.3	1.0
5	IL91-15911	0	2.1	1.5
6	VA97W-375	0	0.3	1.0
7	VA96W-247	5	1.1	1.0
8	T104	0	0.2	1.0
9	T106	30	0.3	1.0
10	IL94-6727	0	0.5	1.0
11	VA98W-586	0	0.3	1.0
12	VA98W-593	0	0.9	1.0
13	D6144	0	1.1	1.0
14	HTY93-72A	0	1.3	1.0
15	G65201	0	0.2	1.0
16	G53135	10	0.2	1.0
17	G53209	10	1.2	1.0
18	G60220	0	1.3	1.0
19	GA911316E45	10	5.3	3.0
20	GA91436E29	0	2.7	1.0
21	IL94-1653	0	5.2	1.0
22	IL95-947	0	0.9	2.5
23	KY89C-804-14-2	5	2.6	1.5
24	KY90C-292-4-1	5	0.6	1.0
25	KY90C-054-6	0	0.5	1.0
26	OH645	0	0.2	1.0
27	OH650	0	0.8	1.0
28	AW-M96-3609	0	0.2	1.0
29	AW-M96-3649	0	0.3	2.0
30	AW-M96-3706	0	0.5	1.5
31	B950346	0	0.7	3.0
32	B950770	5	2.1	2.5
33	B950799	50	3.1	2.5
34	88204RB1-2-1-6-70	0	0.2	1.0
35	92145E8-7-7-1-9	0	0.2	1.0
36	92201D5-2-80	0	0.2	1.0
37	T115	0	2.1	1.0
38	T116	0	2.3	1.0
39	AR839-27-1-3	0	0.2	1.0
40	AR656-5-1	0	0.2	1.0
LOCATION MEANS		3.3	1.2	1.3

WINTER KILL

		Woodburn IN	Lexington KY	Logan Co. KY	Ithaca NY	Smithville OH
		0-9	%	%	%	0-9
1	Caldwell	3.0	0	0	3.7	0
2	Foster	2.5	0	0	3.7	0
3	Patton	2.0	0	0	2.3	0
4	Roane	3.5	0	0	8.3	0
5	IL91-15911	3.0	0	0	7.0	0
6	VA97W-375	4.5	0	0	5.3	0
7	VA96W-247	3.0	0	0	4.0	0
8	T104	1.5	0	0	7.0	0
9	T106	2.5	0	0	16.7	0
10	IL94-6727	2.0	0	0	2.3	0
11	VA98W-586	3.0	0	0	4.0	0
12	VA98W-593	3.0	0	0	1.0	0
13	D6144	1.5	0	0	1.0	0
14	HTY93-72A	2.5	0	0	4.0	0
15	G65201	3.5	0	0	3.7	0
16	G53135	3.0	0	0	7.0	0
17	G53209	2.0	0	0	1.0	0
18	G60220	3.0	0	0	2.3	0
19	GA911316E45	4.0	0	0	8.7	0
20	GA91436E29	6.0	0	0	7.0	0
21	IL94-1653	3.0	0	0	2.3	0
22	IL95-947	2.5	0	0	2.3	0
23	KY89C-804-14-2	3.5	0	0	3.7	0
24	KY90C-292-4-1	3.0	0	0	4.0	0
25	KY90C-054-6	3.0	0	0	12.0	0
26	OH645	3.0	0	0	12.0	0
27	OH650	2.5	0	0	5.7	0
28	AW-M96-3609	2.5	0	0	7.0	0
29	AW-M96-3649	3.0	0	0	1.0	0
30	AW-M96-3706	3.0	0	0	1.0	0
31	B950346	3.0	0	0	3.7	0
32	B950770	3.0	0	0	1.0	0
33	B950799	2.0	0	0	2.3	0
34	88204RB1-2-1-6-70	3.0	0	0	2.3	0
35	92145E8-7-7-1-9	3.5	0	0	12.0	0
36	92201D5-2-80	3.0	0	0	1.0	0
37	T115	2.5	0	0	10.0	0
38	T116	3.5	0	0	2.3	0
39	AR839-27-1-3	3.0	0	0	3.7	0
40	AR656-5-1	4.0	0	0	1.0	0
LOCATION MEANS		3.0	0.0	0.0	4.8	0.0

WINTER KILL

		Wooster OH	Nairn ON	Ridgetown ON	Overton TX
		0-9	%	0-9	0-9
1	Caldwell	0	3.7	0	0
2	Foster	0	1.0	0	0
3	Patton	0	4.7	0	0
4	Roane	0	2.3	0	0
5	IL91-15911	0	1.7	0	0
6	VA97W-375	0	2.3	0	0
7	VA96W-247	0	4.7	0	0
8	T104	0	5.3	0	0
9	T106	0	4.7	0	0
10	IL94-6727	0	3.0	0	0
11	VA98W-586	0	4.7	0	0
12	VA98W-593	0	4.3	0	0
13	D6144	0	5.3	0	0
14	HTY93-72A	0	1.3	0	0
15	G65201	0	4.3	0	0
16	G53135	0	6.3	0	0
17	G53209	0	5.7	0	0
18	G60220	0	4.7	0	0
19	GA911316E45	0	5.7	0	0
20	GA91436E29	0	4.3	0	0
21	IL94-1653	0	5.0	0	0
22	IL95-947	0	7.0	0	0
23	KY89C-804-14-2	0	4.3	0	0
24	KY90C-292-4-1	0	4.7	0	0
25	KY90C-054-6	0	3.7	0	0
26	OH645	0	3.3	0	0
27	OH650	0	3.7	0	0
28	AW-M96-3609	0	3.0	0	0
29	AW-M96-3649	0	6.7	0	0
30	AW-M96-3706	0	4.7	0	0
31	B950346	0	3.7	0	0
32	B950770	0	5.3	0	0
33	B950799	0	4.3	0	0
34	88204RB1-2-1-6-70	0	7.0	0	0
35	92145E8-7-7-1-9	0	6.0	0	0
36	92201D5-2-80	0	3.0	0	0
37	T115	0	4.3	0	0
38	T116	0	4.3	0	0
39	AR839-27-1-3	0	4.7	0	0
40	AR656-5-1	0	3.3	0	0
LOCATION MEANS		0.0	4.3	0.0	0.0

LEAF RUST

		Fayetteville AR	Univ of Del DE	Griffin GA	Lafayette IN	W.Lafayette IN
		%				% flag
1	Caldwell	4.5	0	0	3.00	1.0
2	Foster	11.0		1	7.50	7.0
3	Patton	11.0	0	0	4.75	3.0
4	Roane	11.0	0	2	1.50	0.0
5	IL91-15911	4.5		0	4.50	3.0
6	VA97W-375	4.5		0	1.00	0.5
7	VA96W-247	7.0	0	1	4.50	80.0
8	T104	11.0		0	3.50	0.5
9	T106	0.0		3	1.50	0.5
10	IL94-6727	4.5		0	1.50	1.0
11	VA98W-586	15.0	0	6	1.00	0.5
12	VA98W-593	4.5	0	2	1.00	0.0
13	D6144	30.0	0	3	7.75	7.0
14	HTY93-72A	40.0	0	5	6.25	0.0
15	G65201	2.0	0	1	2.00	3.0
16	G53135	2.0	T	1	1.50	3.0
17	G53209	2.0	0	0	2.75	7.0
18	G60220	2.0	0	0	2.00	5.0
19	GA911316E45	0.0	0	0	1.00	0.5
20	GA91436E29	7.0	0	1	1.00	0.5
21	IL94-1653	4.5	0	0	4.00	2.0
22	IL95-947	4.5	0	0	1.75	1.0
23	KY89C-804-14-2	40.0	0	2	6.75	2.0
24	KY90C-292-4-1	15.0	0	4	2.75	4.0
25	KY90C-054-6	11.0	1	3	5.75	2.0
26	OH645	30.0	0	1	5.50	5.0
27	OH650	11.0	0	0	4.25	10.0
28	AW-M96-3609	40.0	0	0	4.25	1.0
29	AW-M96-3649	4.5	1	9	4.50	2.0
30	AW-M96-3706	4.5	0	5	5.75	7.0
31	B950346	1.0	0	5	1.75	0.0
32	B950770	2.0	0	3	1.00	0.0
33	B950799	4.5	0	2	1.00	0.5
34	88204RB1-2-1-6-70	11.0	0	2	4.00	1.0
35	92145E8-7-7-1-9	1.0	0	0	2.00	1.0
36	92201D5-2-80	0.0	0	0	1.00	0.0
37	T115	7.0	T	4	3.00	2.0
38	T116	3.5	0	4	1.00	0.5
39	AR839-27-1-3	4.5	0	6	2.00	0.5
40	AR656-5-1	30.0	0	1	7.25	0.5
LOCATION MEANS		10.1		1.9	3.2	4.1
GROWTH STAGE/DATE		22-May				

LEAF RUST

			Lexington KY	St.Paul MN	Plymouth NC	Nairn ON
		IT flag	% flag	sev/it		
1	Caldwell	mr	2	40S	4.0	2.0
2	Foster	ms	13	40S	8.5	1.0
3	Patton	s	0	10MR-MS	1.0	1.5
4	Roane		7	60S	3.0	1.0
5	IL91-15911	s	2	10MS-S	3.5	1.0
6	VA97W-375	r	1	TR	0.5	1.0
7	VA96W-247	s	13	10MS-S,40S	5.0	1.5
8	T104	ms	7	60S	4.5	1.5
9	T106		2	TR-MR	6.0	3.0
10	IL94-6727	mr	7	5MS-S	4.0	1.5
11	VA98W-586	mr	0	5MR-MS	2.0	3.0
12	VA98W-593	mr	0	5S	0.0	1.0
13	D6144	ms	0	30S	4.5	1.5
14	HTY93-72A	mr	0	20S	6.5	2.0
15	G65201	s	0	20MR-MS	4.5	2.5
16	G53135	s	0	10R-MR	3.0	2.0
17	G53209	s	1	10R-MR	3.5	1.0
18	G60220	ms	1	5MR-MS	3.5	1.0
19	GA911316E45	r	0	TR-MR	1.0	1.0
20	GA91436E29	ms	0	TMR	1.0	1.0
21	IL94-1653	mr	1	5MS-S	3.5	1.0
22	IL95-947	s	3	5MS	2.0	1.5
23	KY89C-804-14-2	s	0	5MS-S	6.0	2.5
24	KY90C-292-4-1	ms	1	30S	6.5	2.5
25	KY90C-054-6	ms	2	10MS-S	7.0	3.0
26	OH645	s	3	40S	5.0	1.0
27	OH650	ms	2	5S	3.5	1.0
28	AW-M96-3609	mr	1	TS	4.0	1.0
29	AW-M96-3649	mr	0	40S	9.0	1.5
30	AW-M96-3706	ms	3	60S	3.0	2.0
31	B950346		0	TR-MS	4.5	1.0
32	B950770		0	TR-MS	4.5	1.0
33	B950799	ms	0	40S	1.0	1.5
34	88204RB1-2-1-6-70	ms	0	30S	6.0	1.5
35	92145E8-7-7-1-9	s	0	30S	0.0	1.0
36	92201D5-2-80		0	TR	1.0	1.0
37	T115	s	0	40S	7.0	3.5
38	T116	r	0	TR-MR	3.0	2.0
39	AR839-27-1-3	ms	0	30MS-S	3.5	2.0
40	AR656-5-1	s	7	20MR-MS	5.0	3.0
LOCATION MEANS			2.0		3.9	1.6
GROWTH STAGE/DATE				29-Jun		

LEAF RUST

	Ridgetown ON	Overton TX	Blacksburg VA	Warsaw VA
	0-9	0-9	MCRQ00	TLGG00
1	Caldwell	0.0	4	S 3; 1
2	Foster	3.0	7	23; 0; 3
3	Patton	1.0	5	23; 0; 1
4	Roane	0.5	0	S 3; 1
5	IL91-15911	1.0	2	S ;3 0
6	VA97W-375	0.0	0	23; 0; 1
7	VA96W-247	2.5	7	;12 0; 1
8	T104	3.0	1	S S 1
9	T106	1.0	1	S 3; 2
10	IL94-6727	0.5	0	S 3; 0
11	VA98W-586	1.5	1	0; S 1
12	VA98W-593	1.5	1	0; ;1 0
13	D6144	1.0	6	S S 1
14	HTY93-72A	2.5	6	S 0; 1
15	G65201	1.0	3	0; 0; 1
16	G53135	1.5	0	0; ;2 2
17	G53209	1.0	0	0; ;1 0
18	G60220	1.0	3	0; 0; 0
19	GA911316E45	0.0	0	0; 0; 0
20	GA91436E29	0.0	0	0; 3; 0
21	IL94-1653	1.0	2	23 3; 1
22	IL95-947	1.0	1	0;/S S 0
23	KY89C-804-14-2	3.0	7	0;/S 0; 3
24	KY90C-292-4-1	2.5	5	S 3; 2
25	KY90C-054-6	2.0	7	S 0; 2
26	OH645	2.0	6	S 3; 1
27	OH650	1.0	6	;12 0; 3
28	AW-M96-3609	1.0	3	S 0; 3
29	AW-M96-3649	2.0	4	S 0; 3
30	AW-M96-3706	1.0	7	23; 3; 3
31	B950346	0.5	3	S 0; 2
32	B950770	1.0	1	S 0; 2
33	B950799	1.5	1	0; S 1
34	88204RB1-2-1-6-70	1.0	7	S ;2 1
35	92145E8-7-7-1-9	0.0	4	;1 0; 0
36	92201D5-2-80	0.0	0	;23 ;1 0
37	T115	2.0	1	S S 1
38	T116	0.5	1	S S 1
39	AR839-27-1-3	2.5	4	S 3; 2
40	AR656-5-1	2.5	6	0; 0; 4
LOCATION MEANS		1.3	3.1	1.3
GROWTH STAGE/DATE		22-Jun	seedling	seedling

LEAF RUST

Seedling reaction of entries of the 1999-2000 Uniform Eastern Soft Red Wheat Performance Nursery to selected isolates of *Puccinia tritici* f. sp. *tritici* (D.L. Long, USDA-ARS, Cereal Disease

Reactions produced by NA race*

No	Cultivar or Line	MBGQ	CLBL	MCGL	LCBQ	LBBQ	THDL	TNRL	TLGG	PLML	FCMG	Postulated Genes***	
1	Caldwell	3	;3	3	3	3	3	3	3-	;3	3	+	
2	Foster	;	;	3	3	;3	3	;2c	;	;1c	;	10,26	
3	Patton	0;	;	;	;	;	;	;	;	;	;	+	
4	Raone	3	;	3	;	;	;	3	3	;1c	23,+	11,+	
5	IL91-15911	3	3	3	3	3	3	3	;1c	3	3	10,+	
6	VA97W-375	;	;	;1c	3	;1c2	;1c	;	;	;	3	18,26	
7	VA96W-247	;	;	3	;1	;1c2	;1c2	;1c	;	;1c	3	3,26,+	
8	T104	3	3	3	3	3	3	3	3	3	3	0	
9	T106	3	3	3	3	3	3	3	;3	3	3	10,+	
10	IL94-6727	3	3	3	3;	3	3	3	3	3	3	3,10,+	
11	VA98W-586	;	;	;	;	;	;	3	;3-	;3	;	9,10,11	
12	VA98W-593	;	;1c	;	;	;	;	23	;	;	;	+	
13	D6144	3	;3	3	3	3	3	3	;1c	;3	23;	10,+	
14	HTY93-72A	3	;	3	3	3	3	3	3	3	;-3	1,10	
15	G65201	;	;	;	;	;	;	;	;	;	;	+	
16	G53135	0;	;	;	;	0;	0;	;	;	;	;	+	
17	G53209	;	;	;	;	;	;	;	;	;	;	+	
18	G60220	;	;	;	;	;	;	;	;	;	;	+	
19	GA911316E45	0;	0;	;	;	;	;	;1c	;	;	;	+	
20	GA91436E29	0;	;2	;	;	;	;1c	3	;1c2	;	;	9,10,11	
21	IL94-1653	3;	2;	;1c2	;2c	;2c	3;	3	3	3	23	+	
22	IL95-947	3	;	;	3	;3-	3;	3	3	3	;	+	
23	KY89C-804-14-2	3	;	3	;1c	;1c	;1c	3	;	;1c	23	10,11,+	
24	KY90C-292-4-1	3	;	3	;1c	;1c	;	3	;	;	;	10,11,+	
25	KY90C-054-6	3	;1c	3	3	3	3	3	;	3	3	10,+	
26	OH645	3	;	3	;3	;3	3;	3	3	3	23	11,+	
27	OH650	;	1c	;	3-;	;3-	;1c2	;1c	;	;	23cn	+	
28	AW M96-3609	32	;1	3	32	;2	3	;3	;	-	3	10,26,+	
29	AW M96-3649	3	;1	;1c	3	3	;1c	;1c	;	;	3	10,18	
30	AW M96-3706	3-;	3-;	3	;1c	;	3	3;	;1c2	3	3	+	
31	B950346	3	;	;1c	3	3	;1c	;1c	;	;	3	10,18	
32	B950770	3	;	;1c	3	3	;1c	;	;	;	3	10,18	
33	B950799	;-3	3;	;	;	;	;	3	;1c2	3;	;	9,10,11,+	
34	88204RB1-2-1-6-	3	;	3	;3	3;	3	3	3;	;	3,	10,+	
35	92145E8-7-7-1-9	;1c	;	;1c	;	;	;1c	;	;	;	;	+	
36	92201D5-2-80	3	;3	3	;1c	;1c	;1c	;1c3	;1c2	;	;	10,11+	
37	T115	3	3	3	3	3	3	3	3	3	3	0	
38	T116	3	-	3	3	3;	;	;3	;	3	3	10	
39	AR839-27-1-3	3	;	3	-	;1c	;	3	;	;	;	10,11,+	
38	AR656-5-1	;	1c	;	;	-	;	;	;	;	-3	;	+

* Single genes tested = 1, 2a, 2c, 3, 3ka, 9, 10, 11, 16, 17, 18, 24, 26, 30

**Virulence:

MBGQ = Lr1,3,10,11,

THBL = Lr1,2a,2c,3,10,16,17,26

CLLB = Lr3,3ka,9

TNRL = Lr1,2a,2c,3,3ka,9,10,11,24,3

MCGL = Lr1,3,10,11,26

TLGG = Lr1,2a,2c,3,9,11,18

LCBQ = Lr1,10,18,26

PLML - Lr1,2c,3,3ka,9,10,30

LBBQ = Lr1,10,18

F Q = Lr2c,3,3ka,10, 18, 26

***0 = no gene(s) detected with these Lr combinations; += Lr gene(s) present but unable to identify with these Lr virulence combinations

STEM RUST

St.Paul
MN

		sev / IT
1	Caldwell	TR
2	Foster	0
3	Patton	0
4	Roane	60S
5	IL91-15911	5MR
6	VA97W-375	0
7	VA96W-247	0
8	T104	20MS-S
9	T106	5MS-S
10	IL94-6727	0
11	VA98W-586	TR
12	VA98W-593	TR
13	D6144	TR-MR
14	HTY93-72A	10MS-S
15	G65201	5MS
16	G53135	0
17	G53209	TMR
18	G60220	40S
19	GA911316E45	TS
20	GA91436E29	TR
21	IL94-1653	20MS-S
22	IL95-947	5MS-S
23	KY89C-804-14-2	0
24	KY90C-292-4-1	5MS-S
25	KY90C-054-6	0
26	OH645	5MS-S
27	OH650	0
28	AW-M96-3609	0
29	AW-M96-3649	30S
30	AW-M96-3706	40S
31	B950346	0
32	B950770	0
33	B950799	20S
34	88204RB1-2-1-6-70	60S
35	92145E8-7-7-1-9	0
36	92201D5-2-80	0
37	T115	20S
38	T116	0
39	AR839-27-1-3	60MS-S
40	AR656-5-1	60S

GROWTH STAGE/DATE 29-Jun

STRIPE RUST

		Bay AR	Kibler AR	% leaves	% leaves	% heads	% seed set
1	Caldwell	5	50	50	23	5	
2	Foster	6	30	60	60	11	
3	Patton	7	50	60	40	11	
4	Roane	3	15	30	15	40	
5	IL91-15911	4	23	40	11	50	
6	VA97W-375	6	50	70	60	15	
7	VA96W-247	7	60	78	60	5	
8	T104	6	40	50	40	30	
9	T106	6	50	60	40	11	
10	IL94-6727	2	0	0	11	50	
11	VA98W-586	7	40	60	23	40	
12	VA98W-593	3	11	30	19	40	
13	D6144	3	11	15	5	60	
14	HTY93-72A	2	0	0	5	60	
15	G65201	2	0	0	11	60	
16	G53135	3	5	19	23	30	
17	G53209	2	7	40	11	40	
18	G60220	4	23	40	11	60	
19	GA911316E45	3	23	50	60	23	
20	GA91436E29	7	40	60	70	11	
21	IL94-1653	6	33	50	23	50	
22	IL95-947	2	1	1	11	70	
23	KY89C-804-14-2	3	1	8	23	70	
24	KY90C-292-4-1	2	2	5	11	78	
25	KY90C-054-6	2	2	5	11	78	
26	OH645	2	2	9	11	50	
27	OH650	5	19	60	30	23	
28	AW-M96-3609	3	9	15	23	50	
29	AW-M96-3649	8	50	70	60	1	
30	AW-M96-3706	4	16	23	9	50	
31	B950346	6	30	50	40	30	
32	B950770	7	40	60	50	15	
33	B950799	7	40	50	23	23	
34	88204RB1-2-1-6-70	9	50	70	40	1	
35	92145E8-7-7-1-9	1	0	4	11	70	
36	92201D5-2-80	2	0	0	15	78	
37	T115	6	40	60	60	29	
38	T116	6	16	40	70	7	
39	AR839-27-1-3	2	1	1	5	78	
40	AR656-5-1	2	5	5	23	60	
LOCATION MEANS		4.3	22.1	35.0	28.7	39.1	
GROWTH STAGE/DATE			6-Apr	17-Apr	12-May	25-May	

SEPTORIA

		Univ of Del DE	W.Lafayette IN		Lexington KY	Len., Sag. MI	
				0-9 leaves	0-9 glumes	0-9 leaf blotch	0-9
1	Caldwell	1	6.0	4.0	7	5	
2	Foster		3.5	2.5	6	6	
3	Patton	1	3.0	3.0	7	6	
4	Roane	2	3.0	3.0	7	3	
5	IL91-15911		5.0	4.0	7	6	
6	VA97W-375		4.0	5.0	7	3	
7	VA96W-247	2	7.0	4.0	7	3	
8	T104		5.0	5.0	6	8	
9	T106		6.0	3.0	7	7	
10	IL94-6727		4.0	3.0	7	7	
11	VA98W-586	2	4.0	4.0	7	7	
12	VA98W-593	1	1.5	2.0	7	4	
13	D6144	1	9.0	5.0	8	0	
14	HTY93-72A	1	5.0	3.0	8	6	
15	G65201	1	6.0	4.0	8	5	
16	G53135	1	5.0	3.0	8	7	
17	G53209	1	8.0	4.0	7	8	
18	G60220	1	7.0	5.0	7	6	
19	GA911316E45	5	6.0	5.0	8	8	
20	GA91436E29	1	6.0	5.0	7	5	
21	IL94-1653	1	6.0	5.0	7	7	
22	IL95-947	1	4.0	5.0	7	2	
23	KY89C-804-14-2	1	5.0	5.0	8	6	
24	KY90C-292-4-1	2	4.0	6.0	7	6	
25	KY90C-054-6	1	6.5	3.0	7	3	
26	OH645	2	8.0	6.0	7	8	
27	OH650	1	7.0	5.0	7	7	
28	AW-M96-3609	1	4.5	5.0	7	7	
29	AW-M96-3649	1	4.0	5.0	7	4	
30	AW-M96-3706	1	8.0	4.0	7	5	
31	B950346	T	4.0	6.0	6	7	
32	B950770	1	4.0	5.0	7	4	
33	B950799	1	4.0	6.0	7	4	
34	88204RB1-2-1-6-70	2	5.0	5.0	7	4	
35	92145E8-7-7-1-9	1	4.0	4.0	7	5	
36	92201D5-2-80	T	3.0	4.0	6	3	
37	T115	1	4.0	5.0	7	6	
38	T116	1	4.5	5.0	7	6	
39	AR839-27-1-3	1	4.0	4.0	6	2	
40	AR656-5-1	T	4.0	7.0	7	2	
LOCATION MEANS			5.0	4.4	7.0	5.2	
GROWTH STAGE/DATE							

SEPTORIA

		Wooster OH	Nairn ON	Ridgetown ON	Overton TX
		1-5 leaf		0-9 leaf	
1	Caldwell	2.0	5.0	4.0	3
2	Foster	1.0	5.0	4.0	4
3	Patton	2.3	4.5	2.5	5
4	Roane	1.0	3.0	0.5	2
5	IL91-15911	1.0	3.5	4.5	2
6	VA97W-375	1.0	3.0	1.0	2
7	VA96W-247	1.0	4.5	1.5	3
8	T104	1.0	3.5	3.5	7
9	T106	1.0	5.0	5.5	6
10	IL94-6727	1.0	4.0	3.5	2
11	VA98W-586	1.0	6.0	1.5	3
12	VA98W-593	1.0	3.5	1.0	2
13	D6144	2.0	6.0	7.0	4
14	HTY93-72A	2.3	4.0	3.5	3
15	G65201	1.7	5.5	4.5	2
16	G53135	1.0	5.5	6.0	4
17	G53209	2.0	4.0	2.5	4
18	G60220	1.0	5.0	5.0	3
19	GA911316E45	1.0	4.0	3.5	3
20	GA91436E29	1.0	4.0	2.5	2
21	IL94-1653	2.0	5.0	4.5	2
22	IL95-947	1.0	4.0	2.5	2
23	KY89C-804-14-2	1.0	4.5	2.0	3
24	KY90C-292-4-1	1.7	4.0	2.0	5
25	KY90C-054-6	1.0	4.0	2.0	0
26	OH645	1.0	5.5	4.5	0
27	OH650	1.7	4.0	4.0	6
28	AW-M96-3609	1.3	5.0	2.5	4
29	AW-M96-3649	1.0	5.5	2.0	4
30	AW-M96-3706	1.0	4.5	4.0	4
31	B950346	1.0	5.5	2.0	2
32	B950770	1.0	5.5	1.0	3
33	B950799	1.0	5.0	1.0	3
34	88204RB1-2-1-6-70	1.0	5.0	4.0	4
35	92145E8-7-7-1-9	1.7	4.0	2.0	4
36	92201D5-2-80	1.0	3.0	1.0	2
37	T115	1.0	5.0	3.5	3
38	T116	1.3	4.0	2.0	4
39	AR839-27-1-3	1.7	3.5	4.0	3
40	AR656-5-1	1.7	4.0	2.0	6
LOCATION MEANS GROWTH STAGE/DATE		1.3	4.5	3.0 31-May	3.3

LEAF BLIGHT

Lafayette
IN

1	Caldwell	2.75
2	Foster	5.50
3	Patton	4.50
4	Roane	2.75
5	IL91-15911	6.75
6	VA97W-375	2.50
7	VA96W-247	4.75
8	T104	4.75
9	T106	5.25
10	IL94-6727	4.75
11	VA98W-586	2.75
12	VA98W-593	1.25
13	D6144	6.50
14	HTY93-72A	5.50
15	G65201	5.25
16	G53135	5.25
17	G53209	6.00
18	G60220	6.00
19	GA911316E45	3.25
20	GA91436E29	3.75
21	IL94-1653	5.75
22	IL95-947	3.00
23	KY89C-804-14-2	4.50
24	KY90C-292-4-1	3.75
25	KY90C-054-6	4.75
26	OH645	5.75
27	OH650	5.50
28	AW-M96-3609	4.50
29	AW-M96-3649	4.00
30	AW-M96-3706	4.50
31	B950346	3.50
32	B950770	2.75
33	B950799	2.50
34	88204RB1-2-1-6-70	4.75
35	92145E8-7-7-1-9	5.25
36	92201D5-2-80	2.50
37	T115	6.25
38	T116	4.75
39	AR839-27-1-3	4.25
40	AR656-5-1	6.25
LOCATION MEANS		4.46

POWDERY MILDEW

		Fayetteville AR	Hope AR	Univ of Del DE	Marianna FL	Griffin GA
		%	%		0-9	
1	Caldwell	15.0	30	5	1.0	7
2	Foster	1.0	15		3.5	6
3	Patton	0.0	23	5	5.0	7
4	Roane	0.0	11	2	0.5	0
5	IL91-15911	1.0	30		1.5	5
6	VA97W-375	0.0	0		0.0	0
7	VA96W-247	0.0	0	0	0.0	1
8	T104	11.0	70		8.0	7
9	T106	4.5	40		6.0	4
10	IL94-6727	8.5	40		5.5	8
11	VA98W-586	0.0	1	0	0.0	0
12	VA98W-593	0.0	0	0	0.0	0
13	D6144	1.0	0	1	4.0	2
14	HTY93-72A	2.0	40	6	6.0	5
15	G65201	8.5	50	6	7.0	6
16	G53135	1.0	1	5	1.5	1
17	G53209	1.0	11	6	5.5	3
18	G60220	2.0	23	6	5.0	6
19	GA911316E45	0.0	0	1	0.0	2
20	GA91436E29	0.0	4	1	1.5	1
21	IL94-1653	3.5	4	1	0.5	5
22	IL95-947	0.0	15	2	1.5	2
23	KY89C-804-14-2	0.0	11	T	1.0	3
24	KY90C-292-4-1	0.0	0	5	1.0	2
25	KY90C-054-6	0.0	4	5	4.0	2
26	OH645	1.0	4	1	1.0	0
27	OH650	0.0	0	2	0.5	0
28	AW-M96-3609	22.5	40	8	4.0	4
29	AW-M96-3649	0.0	5	5	5.0	
30	AW-M96-3706	15.0	30	6	5.0	
31	B950346	1.0	2	6	4.0	
32	B950770	0.0	0	5	1.0	
33	B950799	0.0	0	2	1.0	
34	88204RB1-2-1-6-70	7.5	40	5	5.5	
35	92145E8-7-7-1-9	0.0	0	T	0.0	
36	92201D5-2-80	1.0	1	1	0.0	
37	T115	22.5	50	5	8.0	
38	T116	3.5	15	5	0.5	
39	AR839-27-1-3	30.0	30	0	1.0	
40	AR656-5-1	0.0	0	6	0.5	
LOCATION MEANS		4.1	16.0		2.7	
GROWTH STAGE/DATE		5-May	17-Apr		29-Mar	

POWDERY MILDEW

		Urbana IL	Greensburg IN		Lafayette IN	Woodburn IN
		1-5	0-9	0-9 flag		0-9
1	Caldwell	3.3	5.0	2.0	1.0	3.0
2	Foster	2.7	6.0	1.0	1.5	2.0
3	Patton	3.3	7.0	1.0	2.0	1.5
4	Roane	1.0	3.0	1.0	1.0	1.0
5	IL91-15911	2.3	4.0	1.0	1.5	2.0
6	VA97W-375	1.0	2.6	1.0	1.0	1.0
7	VA96W-247	1.0	3.6	1.0	1.0	1.0
8	T104	4.7	6.6	1.5	5.0	2.0
9	T106	2.0	4.6	1.0	3.0	3.0
10	IL94-6727	2.7	7.6	2.0	3.5	3.0
11	VA98W-586	1.0	3.0	1.0	1.0	1.0
12	VA98W-593	1.0	2.6	1.0	1.0	1.0
13	D6144	2.0	5.0	1.0	1.0	2.0
14	HTY93-72A	3.3	6.6	1.0	2.0	3.0
15	G65201	4.0	8.0	2.0	3.0	3.5
16	G53135	1.3	3.0	1.0	1.0	1.5
17	G53209	3.3	4.6	2.0	1.5	2.0
18	G60220	3.0	6.6	1.0	3.5	4.5
19	GA911316E45	1.3	3.0	1.0	1.0	1.0
20	GA91436E29	1.3	4.0	1.0	1.0	1.0
21	IL94-1653	2.0	5.6	1.0	2.0	3.0
22	IL95-947	1.3	5.0	1.0	1.0	2.5
23	KY89C-804-14-2	2.7	4.0	2.0	1.0	1.5
24	KY90C-292-4-1	1.7	4.6	1.0	1.5	1.0
25	KY90C-054-6	1.3	3.0	1.0	1.0	1.5
26	OH645	2.7	6.6	1.0	1.0	1.5
27	OH650	1.7	4.0	1.0	1.0	1.0
28	AW-M96-3609	5.0	6.0	1.0	2.5	3.5
29	AW-M96-3649	2.7	5.6	1.0	1.0	1.0
30	AW-M96-3706	4.7	6.6	1.0	4.0	3.5
31	B950346	1.3	3.6	1.0	1.0	1.5
32	B950770	1.7	3.0	1.0	1.0	1.0
33	B950799	1.0	3.0	1.0	1.0	1.0
34	88204RB1-2-1-6-70	3.7	4.6	1.0	1.5	2.0
35	92145E8-7-7-1-9	1.0	3.0	1.0	1.0	1.0
36	92201D5-2-80	1.0	2.0	1.0	1.0	1.0
37	T115	3.7	6.6	2.0	5.0	3.5
38	T116	1.0	4.6	1.0	1.0	1.0
39	AR839-27-1-3	3.3	4.0	1.0	2.0	3.0
40	AR656-5-1	2.7	5.0	1.0	1.0	1.0
LOCATION MEANS GROWTH STAGE/DATE		2.3	4.7 28-Apr	1.2 1-Jun	1.7	1.9

POWDERY MILDEW

		Lexington KY	Smithville OH	Wooster OH	Nairn ON	Ridgetown ON
		0-9		1-5		0-9
1	Caldwell	7	S	1.7	3.3	5.0
2	Foster	6	MS	1.0	2.7	3.0
3	Patton	5	MS	1.0	1.3	3.5
4	Roane	1	R	1.0	0.0	0.5
5	IL91-15911	6	R	1.0	3.0	2.5
6	VA97W-375	0	VR	1.0	0.0	0.5
7	VA96W-247	5	MS	1.0	0.0	0.5
8	T104	7	VS	2.7	3.3	5.5
9	T106	6	MR	1.7	3.7	4.0
10	IL94-6727	7	S	2.0	3.0	4.5
11	VA98W-586	0	VR	1.0	0.0	0.0
12	VA98W-593	0	VR	1.0	0.0	0.0
13	D6144	6	R	1.3	1.7	2.0
14	HTY93-72A	6	R	1.3	2.0	3.0
15	G65201	6	MS	2.7	3.7	5.0
16	G53135	5	R	1.3	0.7	0.5
17	G53209	6	MS	1.3	0.3	2.0
18	G60220	7	MS	1.7	3.0	3.5
19	GA911316E45	4	VR	1.0	0.0	0.0
20	GA91436E29	5	VR	1.0	0.0	2.0
21	IL94-1653	5	MR	1.0	2.0	2.5
22	IL95-947	6	S	1.3	0.7	2.5
23	KY89C-804-14-2	6	MR	1.3	1.3	2.0
24	KY90C-292-4-1	5	R	1.0	0.0	1.0
25	KY90C-054-6	6	MR	1.7	1.0	1.5
26	OH645	5	MR	1.0	1.7	2.5
27	OH650	6	R	1.3	0.0	2.5
28	AW-M96-3609	8	VS	2.7	4.7	5.5
29	AW-M96-3649	6	VS	1.7	1.0	1.5
30	AW-M96-3706	7	MS	1.7	3.3	4.5
31	B950346	6	R	1.0	0.3	1.0
32	B950770	6	MR	1.0	0.0	0.5
33	B950799	4	MR	1.0	0.3	1.5
34	88204RB1-2-1-6-70	6	MS	1.3	3.0	3.0
35	92145E8-7-7-1-9	2	VR	1.0	0.0	1.0
36	92201D5-2-80	0	VR	1.0	0.0	0.0
37	T115	7	MR	1.0	3.3	4.0
38	T116	5	MR	2.0	0.0	0.5
39	AR839-27-1-3	6	VS	1.0	1.3	3.0
40	AR656-5-1	6	VS	1.0	0.3	1.0
LOCATION MEANS		5.1		1.3	1.4	2.2
GROWTH STAGE/DATE			24-May		26-May	30-May

POWDERY MILDEW

		Overton TX	Blacksburg VA	Warsaw VA
		0-9	0-9	NC100
		0-9		0-9
1	Caldwell	3	6	4S
2	Foster	2	7	0R
3	Patton	0	4	0R
4	Roane	0	0	0R
5	IL91-15911	0	4	4S
6	VA97W-375	0	0	12MRI
7	VA96W-247	0	0	23IMS
8	T104	7	8	4S
9	T106	3	6	4S
10	IL94-6727	3	7	4S
11	VA98W-586	0	0	0R
12	VA98W-593	0	0	0R
13	D6144	0	4	4S
14	HTY93-72A	0	7	4S
15	G65201	2	8	12MR
16	G53135	1	4	23IMS
17	G53209	0	5	3MS
18	G60220	0	8	3MS
19	GA911316E45	0	2	3MS
20	GA91436E29	0	2	34S
21	IL94-1653	0	4	4S
22	IL95-947	0	5	4S
23	KY89C-804-14-2	1	4	4S
24	KY90C-292-4-1	0	3	2I
25	KY90C-054-6	0	7	3MS
26	OH645	0	3	4S
27	OH650	0	2	12MR
28	AW-M96-3609	0	8	4S
29	AW-M96-3649	0	8	4S
30	AW-M96-3706	0	9	4S
31	B950346	0	5	4S
32	B950770	0	5	4S
33	B950799	0	1	4S
34	88204RB1-2-1-6-70	0	6	4S
35	92145E8-7-7-1-9	0	0	0R
36	92201D5-2-80	0	0	0R
37	T115	0	8	4S
38	T116	0	1	4S
39	AR839-27-1-3	1	6	4S
40	AR656-5-1	0	3	1R
LOCATION MEANS GROWTH STAGE/DATE		0.6	4.3	3.9
				seedling

POWDERY MILDEW

	Aso	E3-25	WKin91	W72-27	127	144	#9	43a1	156b1	Postulated Resistance Genes	Effective Genes	Isolates
Axminster Pm1	R	S	S	S	M	R	R	RS	R		Pm1	156b1, #9
Orestis Pm2	R	S	S	M	R	R	M	S	S		Pm2	144, Aso, 127
Asosan Pm3a	S	S	S	R	R	R	S	S	S		Pm3a	W72-27, 144
Chul Pm3b	M	M	S	R	MR	MS	R	R	S		Pm3b	#9, W72-27
Sonora Pm3c	S	S	S	RM	S	S	S	S	S		Pm4a	W72-27, WKin91
Yuma Pm4a	S	S	R	R	S	S	S	S	S		Pm4b, Pm1	43a1, 156b1
Ronos Pm4b	M	S	RM	RM	S	MS	S	R	M		Pm8	156b1, W72-27
CI 14125 Pm5	S	S	S	S	S	S	S	S	S		Pm12	Aso, E3-25
C747 Pm6	S	S	S	M	M	S	M	S	S		Pm17, Pm12	E3-25
Transec Pm7	S	S	S	M	S	S	S	S	S			
Kavkaz Pm8	S	S	R	RM	S	S	S	M	R			
Pm12	R	R	R	R	R	R	R	R	R			
Pm16	R	S	S	R	R	R	R	R	R			
Amigo Pm17	S	R	M	R	M	M	R	R	S			
Mich Amber	S	S	S	RS	M	M	S	S	S			
Chancellor	S	S	S	M	M	S	S	S	S			
Caldwell	S	S	S	R	S	S	S	S	S	N/A		
Foster	S	M	M	R	S	RS	M	RM	MS	N/A		
Patton	R	M	RS	R	S	M	M	R	R	Pm4b		
Roane	S	S	R	R	S	S	S	S	MR	Pm4a		
IL91-15911	S	S	S	R	S	RM	M	S	S	Pm3a*		
VA97W-375	M	M	MS	R	M	R	M	M	R	Pm3a, Pm8		
VA96W-247	S	M	S	R	M	R	M	R	R	Pm3a, Pm4b		
T104	S	S	S	S	S	S	S	S	S	N/A		
T106	S	S	S	RS	S	S	S	S	S	N/A		
IL94-6727	S	S	S	S	S	S	S	S	S	N/A		
VA98W-586	M	M	R	R	M	R	S	M	M	Pm3a, Pm4a		
VA98W-593	M	MS	M	M	S	M	M	M	M	N/A		
D6144	S	S	S	R	S	S	M	S	S	N/A		
HTY93-72A	S	S	S	R	S	S	S	S	S	N/A		
G65201	M	MR	R	R	S	R	S	M	MS	Pm3a, Pm4a		
G53135	MR	M	R	R	M	R	M	R	S	Pm3a, Pm4a		
G53209	R	S	MS	R	S	R	RM	R	R	Pm1*, Pm3a, Pm4b		
G60220	RS	S	RM	R	RS	RM	RS	R	R	Pm3a*, Pm4a*, Pm4b		
GA911316E45	SM	MS	S	R	RM	R	R	S	MS	Pm3a, Pm3b		
GA91436E29	S	S	S	R	R	R	MS	S	S	Pm3a		
IL94-1653	S	S	S	R	S	S	S	S	S	N/A		
IL95-947	S	S	S	R	R	R	S	S	S	Pm3a		
KY89C-804-142	S	S	S	R	R	R	MS	S	S	Pm3a		
KY90C-292-41	S	M	RM	R	R	R	S	S	MS	Pm3a, Pm4a*		
KY90C-054-6	S	S	S	M	MS	M	S	S	S	N/A		
OH645	S	S	S	R	S	S	S	S	S	N/A		
OH650	M	M	M	R	S	S	S	M	MS	N/A		
AWM96-3609	S	S	S	RS	S	S	M	S	S	N/A		
AWM96-3649	S	S	S	M	S	S	S	S	S	N/A		
AWM96-3706	S	S	S	S	S	S	S	S	S	N/A		
B950346	S	S	S	RS	S	S	M	S	S	N/A		
B950770	S	S	S	R	SM	M	MS	S	S	N/A		
B950799	S	S	S	M	S	S	MS	S	S	N/A		
88204RB121670	S	S	S	S	S	S	S	S	S	N/A		
92145E8-7719	R	MR	R	M	S	R	S	RM	MR	Pm4b*, Pm12*, Pm17*		
92201D5280	R	R	R	R	R	R	S	RM	MR	Pm2, Pm3a, Pm4a, Pm4b*, Pm8*, Pm12, Pm17		
T115	S	S	S	S	S	S	S	S	S	N/A		
T116	S	S	S	MS	S	S	MS	S	S	N/A		
AR839-2713	S	S	S	S	S	S	S	S	S	N/A		
AR656-5-1	S	S	S	R	R	R	MR	S	S	Pm3a, Pm3b*		

Note: Genes postulated by applying gene for gene analysis; a more complete determination will involve pedigree analysis.

Denotes mixed reaction type of one of the ratings. () denotes missing data point.

FUSARIUM HEAD BLIGHT

		Urbana IL	% incidence	% severity	index	kernel quality	Mich. State Univ. DON ppm
1	Caldwell		47.5	28.0	15.8	6.5	2.7
2	Foster		42.5	16.9	7.0	4.5	5.0
3	Patton		15.0	9.8	1.6	5.0	5.0
4	Roane		52.5	19.6	10.0	5.5	3.1
5	IL91-15911		20.0	15.6	2.9	5.0	.
6	VA97W-375		57.5	37.7	21.8	6.0	0.9
7	VA96W-247		67.5	33.2	22.9	7.0	5.8
8	T104		15.0	22.9	3.8	6.0	2.8
9	T106		30.0	29.6	8.9	7.0	5.0
10	IL94-6727		55.0	19.7	10.5	3.5	7.2
11	VA98W-586		42.5	12.7	5.8	4.5	2.7
12	VA98W-593		47.5	53.3	25.9	7.0	8.1
13	D6144		85.0	53.4	45.7	8.0	18.7
14	HTY93-72A		30.0	34.6	11.0	4.0	7.9
15	G65201		13.0	15.6	2.2	4.0	1.7
16	G53135		42.5	16.0	7.9	4.0	2.4
17	G53209		21.0	15.4	3.4	5.5	2.7
18	G60220		17.0	41.1	6.3	4.5	2.9
19	GA911316E45		60.0	35.0	21.0	7.0	9.8
20	GA91436E29		75.0	42.0	31.9	6.5	3.0
21	IL94-1653		21.5	23.5	5.0	2.5	2.9
22	IL95-947		42.5	28.8	12.3	6.5	6.8
23	KY89C-804-14-2		80.0	43.2	35.1	6.5	3.2
24	KY90C-292-4-1		40.0	26.5	10.6	5.0	6.9
25	KY90C-054-6		47.5	17.7	8.4	5.0	5.4
26	OH645		52.5	32.7	17.4	5.0	8.0
27	OH650		82.5	26.9	22.1	7.0	8.4
28	AW-M96-3609		42.5	26.5	11.2	6.0	5.4
29	AW-M96-3649		67.5	46.5	31.6	7.0	10.9
30	AW-M96-3706		65.0	43.1	27.6	6.0	8.5
31	B950346		47.5	36.0	16.8	7.5	7.1
32	B950770		62.5	48.2	30.3	7.5	10.4
33	B950799		67.5	38.1	26.2	4.5	6.3
34	88204RB1-2-1-6-70		37.5	19.8	7.5	7.0	3.3
35	92145E8-7-7-1-9		30.0	20.7	5.7	5.5	4.3
36	92201D5-2-80		27.5	24.8	6.9	6.0	7.0
37	T115		72.5	33.1	23.8	6.5	7.2
38	T116		77.5	35.7	27.3	6.5	6.1
39	AR839-27-1-3		80.0	72.6	58.1	5.0	17.9
40	AR656-5-1		72.5	49.6	35.8	6.0	7.1
LOCATION MEANS			48.8	31.2	17.2	5.7	6.2

FUSARIUM HEAD BLIGHT

		W.Lafayette IN	Woodburn IN	Ithaca NY
		% incidence	% severity	%
1	Caldwell	35	15	20
2	Foster	30	15	20
3	Patton	30	10	10
4	Roane	20	5	10
5	IL91-15911	15	5	20
6	VA97W-375	70	40	30
7	VA96W-247	50	15	30
8	T104	20	10	30
9	T106	40	20	40
10	IL94-6727			10
11	VA98W-586	40	15	20
12	VA98W-593	50	40	40
13	D6144	50	30	70
14	HTY93-72A	25	25	40
15	G65201	25	30	10
16	G53135	40	20	20
17	G53209	30	20	30
18	G60220	40	50	10
19	GA911316E45	70	15	70
20	GA91436E29	90	30	50
21	IL94-1653	35	15	30
22	IL95-947	25	15	20
23	KY89C-804-14-2	80	30	60
24	KY90C-292-4-1	40	25	50
25	KY90C-054-6	20	10	40
26	OH645	20	20	30
27	OH650	30	30	30
28	AW-M96-3609	40	25	30
29	AW-M96-3649	80	40	30
30	AW-M96-3706	40	30	50
31	B950346	60	25	50
32	B950770	60	30	30
33	B950799			50
34	88204RB1-2-1-6-70	10	25	40
35	92145E8-7-7-1-9	30	50	20
36	92201D5-2-80	40	30	5
37	T115	70	20	60
38	T116	20	10	30
39	AR839-27-1-3	10	5	20
40	AR656-5-1	10	10	30
LOCATION MEANS		39.2	22.5	32.1
				4.3

TAKE-ALL

		Griffin GA	Knoxville TN
		%	
1	Caldwell	30	23
2	Foster	30	28
3	Patton	20	28
4	Roane	10	48
5	IL91-15911	30	33
6	VA97W-375	10	22
7	VA96W-247	10	33
8	T104		13
9	T106		23
10	IL94-6727		26
11	VA98W-586		66
12	VA98W-593		43
13	D6144		8
14	HTY93-72A		33
15	G65201		23
16	G53135		43
17	G53209		22
18	G60220		25
19	GA911316E45		62
20	GA91436E29		48
21	IL94-1653		12
22	IL95-947		23
23	KY89C-804-14-2	30	42
24	KY90C-292-4-1	80	25
25	KY90C-054-6	30	27
26	OH645	10	35
27	OH650	30	45
28	AW-M96-3609	20	18
29	AW-M96-3649		32
30	AW-M96-3706		18
31	B950346		32
32	B950770		22
33	B950799		50
34	88204RB1-2-1-6-70		13
35	92145E8-7-7-1-9	20	27
36	92201D5-2-80	60	33
37	T115		58
38	T116	10	45
39	AR839-27-1-3	10	20
40	AR656-5-1	10	15

LOCATION MEANS

31.1

BYDV

		Urbana IL	% stunting	Columbia MO	Blacksburg VA
		0-9		%	0-9
1	Caldwell	4.5	7.5	13	5
2	Foster	6.5	15.5	11	4
3	Patton	5.0	12.3	11	4
4	Roane	7.0	20.7	4	2
5	IL91-15911	6.0	10.6	5	4
6	VA97W-375	4.5	3.9	16	3
7	VA96W-247	5.0	7.1	11	3
8	T104	7.0	8.9	15	5
9	T106	7.5	12.0	18	4
10	IL94-6727	6.5	12.3	5	4
11	VA98W-586	5.0	11.3	4	2
12	VA98W-593	4.5	12.3	3	3
13	D6144	6.0	14.5	32	5
14	HTY93-72A	5.5	12.3	6	5
15	G65201	6.5	10.8	11	5
16	G53135	5.0	10.2	9	4
17	G53209	5.5	9.2	18	4
18	G60220	7.0	13.1	13	4
19	GA911316E45	8.5	26.4	16	3
20	GA91436E29	7.0	17.2	19	4
21	IL94-1653	4.0	0.0	3	3
22	IL95-947	5.0	7.5	4	4
23	KY89C-804-14-2	7.0	22.6	8	4
24	KY90C-292-4-1	5.0	19.7	9	2
25	KY90C-054-6	6.0	12.7	11	4
26	OH645	6.0	14.2	4	3
27	OH650	8.5	34.4	14	6
28	AW-M96-3609	4.0	13.3	12	5
29	AW-M96-3649	5.0	18.2	8	4
30	AW-M96-3706	7.0	14.3	11	6
31	B950346	6.5	13.6	19	4
32	B950770	6.0	16.4	11	3
33	B950799	5.5	10.2	12	3
34	88204RB1-2-1-6-70	6.0	6.6	15	3
35	92145E8-7-7-1-9	5.5	11.2	15	3
36	92201D5-2-80	6.5	20.7	18	4
37	T115	7.5	18.3	12	4
38	T116	7.0	14.6	11	3
39	AR839-27-1-3	6.0	15.9	4	3
40	AR656-5-1	6.0	16.3	19	5
LOCATION MEANS		6.0	13.7	11.5	3.8

VIRUSES

Keiser AR

		Spindle streak 0-9	Soilborne mosaic 0-9	SS+SB 0-9	No virus plant vigor 0-9	Spindle streak plant vigor 0-9
1	Caldwell	1.3	2.2	1.8	8.0	9.0
2	Foster	0.5	3.7	0.3	8.7	8.3
3	Patton	1.3	3.8	1.0	8.3	6.7
4	Roane	1.5	0.5	0.8	8.7	8.7
5	IL91-15911	0.2	0.0	0.8	9.0	9.0
6	VA97W-375	2.3	2.0	2.0	9.0	7.3
7	VA96W-247	4.7	3.3	4.3	8.7	6.0
8	T104	2.8	0.5	0.8	8.3	8.0
9	T106	3.7	2.2	3.2	9.0	7.7
10	IL94-6727	1.8	0.5	0.7	9.0	7.7
11	VA98W-586	0.7	1.3	0.0	9.0	9.0
12	VA98W-593	0.7	2.3	4.3	9.0	7.7
13	D6144	0.2	1.5	0.0	9.0	8.7
14	HTY93-72A	0.0	3.2	0.2	9.0	9.0
15	G65201	1.3	1.3	1.2	9.0	8.3
16	G53135	1.5	0.0	0.7	9.0	8.3
17	G53209	2.7	0.5	2.3	9.0	6.3
18	G60220	0.0	3.2	0.0	8.7	8.3
19	GA911316E45	2.5	3.0	0.5	7.7	7.3
20	GA91436E29	1.3	3.2	1.3	8.7	8.3
21	IL94-1653	0.7	4.5	3.7	8.7	8.7
22	IL95-947	0.7	0.0	0.2	8.3	9.0
23	KY89C-804-14-2	0.2	3.7	0.0	9.0	8.0
24	KY90C-292-4-1	2.2	1.5	2.0	8.7	9.0
25	KY90C-054-6	0.0	1.7	0.0	9.0	9.0
26	OH645	0.0	1.5	0.7	9.0	9.0
27	OH650	4.0	4.3	2.8	5.7	7.0
28	AW-M96-3609	1.8	2.2	2.7	9.0	8.7
29	AW-M96-3649	0.0	1.2	2.0	9.0	8.7
30	AW-M96-3706	0.0	0.0	0.0	9.0	9.0
31	B950346	0.2	1.3	2.8	9.0	8.7
32	B950770	0.5	1.5	0.2	9.0	8.3
33	B950799	0.0	1.3	1.0	9.0	9.0
34	88204RB1-2-1-6-70	0.0	1.7	0.0	8.7	8.7
35	92145E8-7-7-1-9	0.8	2.3	1.8	8.7	6.5
36	92201D5-2-80	4.5	3.0	6.5	9.0	2.7
37	T115	1.7	2.0	3.8	9.0	8.0
38	T116	0.2	5.3	1.8	9.0	8.0
39	AR839-27-1-3	0.0	1.3	0.5	9.0	9.0
40	AR656-5-1	1.7	1.8	2.3	9.0	8.0
LOCATION MEANS		1.3	2.0	1.5	8.7	8.1

VIRUSES

Keiser
AR

		Soilborne mosaic plant vigor 0-9	SS+SB plant vigor 0-9	No virus plant ht cm	Spindle streak plant ht cm	Soilborne mosaic plant ht cm
1	Caldwell	6.7	7.7	111	110	80
2	Foster	6.0	8.3	115	105	81
3	Patton	5.7	7.7	100	99	79
4	Roane	7.7	4.7	101	102	83
5	IL91-15911	7.3	8.7	111	115	86
6	VA97W-375	7.3	7.3	93	85	76
7	VA96W-247	7.3	6.3	94	82	80
8	T104	7.3	8.0	95	93	83
9	T106	6.3	7.3	101	95	76
10	IL94-6727	6.0	6.7	116	113	84
11	VA98W-586	7.7	8.7	101	103	82
12	VA98W-593	7.7	7.0	100	88	76
13	D6144	8.7	8.0	107	110	94
14	HTY93-72A	7.0	8.0	107	112	84
15	G65201	7.0	7.7	105	103	90
16	G53135	6.3	8.7	102	99	80
17	G53209	6.3	6.0	109	99	83
18	G60220	6.7	7.3	112	109	88
19	GA911316E45	6.7	8.0	93	92	75
20	GA91436E29	6.0	7.0	98	97	70
21	IL94-1653	7.0	7.7	111	115	90
22	IL95-947	7.0	8.3	119	121	91
23	KY89C-804-14-2	4.7	5.7	107	103	72
24	KY90C-292-4-1	7.0	8.3	96	100	76
25	KY90C-054-6	6.7	8.7	109	105	93
26	OH645	7.7	6.7	107	101	86
27	OH650	5.0	6.0	91	96	70
28	AW-M96-3609	6.3	6.3	102	101	72
29	AW-M96-3649	7.3	7.7	112	109	86
30	AW-M96-3706	7.3	8.0	111	104	83
31	B950346	7.3	6.0	110	105	85
32	B950770	7.0	8.0	102	98	78
33	B950799	7.7	7.7	108	109	84
34	88204RB1-2-1-6-70	6.7	8.3	113	107	81
35	92145E8-7-7-1-9	6.0	7.0	94	84	64
36	92201D5-2-80	7.0	5.7	106	83	79
37	T115	7.0	5.3	97	92	73
38	T116	4.3	5.7	84	87	58
39	AR839-27-1-3	6.0	8.3	117	110	80
40	AR656-5-1	6.0	7.7	105	96	79
LOCATION MEANS		6.7	7.3	104.3	100.9	80.3

VIRUSES

		Keiser AR	Urbana IL	W.Lafayette IN	Lexington KY	Wooster OH
		SS+SB plant ht cm	SBMV 0-9	SBM 0-9	virus complex 0-3	virus complex 1-5
1	Caldwell	96	6.0	5.0	1	3.3
2	Foster	106	2.5	3.0	1	2.3
3	Patton	104	0.0	3.5	1	2.0
4	Roane	80	4.5	5.0	1	1.0
5	IL91-15911	100	2.5	3.0	1	1.7
6	VA97W-375	85	5.5	4.0	1	1.3
7	VA96W-247	81	7.5	5.0	2	1.7
8	T104	92	6.5	5.5	1	1.7
9	T106	93	7.0	10.0	2	3.0
10	IL94-6727	103	2.0	0.0	1	2.0
11	VA98W-586	105	7.5	5.0	1	2.0
12	VA98W-593	78	6.0	4.0	1	1.3
13	D6144	113	4.5	3.5	0	3.0
14	HTY93-72A	103	3.5	3.0	1	1.7
15	G65201	104	6.0	2.5	1	2.0
16	G53135	96	4.5	3.5	2	3.0
17	G53209	94	1.5	5.0	1	2.0
18	G60220	108	2.5	3.5	1	2.7
19	GA911316E45	87	4.5	4.0	2	2.7
20	GA91436E29	94	5.5	4.0	1	2.7
21	IL94-1653	97	3.5	5.0	1	1.7
22	IL95-947	115	0.5	2.0	1	1.0
23	KY89C-804-14-2	92	0.0	3.5	2	1.3
24	KY90C-292-4-1	105	2.0	4.5	1	1.3
25	KY90C-054-6	117	2.5	4.0	1	1.7
26	OH645	96	0.0	2.5	1	1.0
27	OH650	82	5.5	4.0	0	2.0
28	AW-M96-3609	94	2.0	3.5	2	1.0
29	AW-M96-3649	101	4.5	4.0	1	2.0
30	AW-M96-3706	91	2.5	2.5	0	1.7
31	B950346	102	3.0	4.5	1	2.3
32	B950770	105	5.5	4.5	1	2.0
33	B950799	105	1.5	0.0	1	1.7
34	88204RB1-2-1-6-70	98	0.5		1	1.7
35	92145E8-7-7-1-9	85	5.5	4.0	1	1.0
36	92201D5-2-80	83	7.0	4.0	1	1.0
37	T115	82	6.5	3.0	2	2.0
38	T116	83	4.0	3.5	2	2.7
39	AR839-27-1-3	107	1.5	2.5	1	1.0
40	AR656-5-1	96	5.0	3.0	1	1.3
LOCATION MEANS		96.5	3.8	3.8	1.1	1.9

HESSIAN FLY

W.Lafayette IN

		Biotype GP	Biotype B	Biotype C	Biotype D	Biotype E
1	Caldwell	12 - 0	16 - 0	0 - 12	0 - 15	15 - 0
2	Foster	0 - 14	0 - 12	0 - 13	0 - 10	0 - 10
3	Patton	13 - 1	10 - 1	11 - 2	7 - 2	9 - 3
4	Roane	14 - 3	7 - 9	7 - 12	0 - 15	8 - 4
5	IL91-15911	11 - 2	7 - 5	1 - 12	0 - 16	9 - 3
6	VA97W-375	0 - 16	0 - 13	0 - 16	0 - 14	0 - 14
7	VA96W-247	0 - 14	0 - 11	0 - 14	0 - 14	0 - 13
8	T104	8 - 4	10 - 5	0 - 17	0 - 14	7 - 6
9	T106	0 - 16	0 - 12	0 - 11	0 - 15	0 - 16
10	IL94-6727	17 - 0	10 - 3	0 - 14	0 - 14	16 - 0
11	VA98W-586	0 - 15	0 - 17	0 - 12	0 - 17	0 - 14
12	VA98W-593	0 - 14	0 - 12	0 - 14	0 - 14	0 - 13
13	D6144	12 - 0	10 - 2	0 - 21	0 - 15	14 - 0
14	HTY93-72A	0 - 16	0 - 20	0 - 18	0 - 16	0 - 13
15	G65201	14 - 1	10 - 4	0 - 13	0 - 13	12 - 1
16	G53135	5 - 10	0 - 16	7 - 5	0 - 16	0 - 14
17	G53209	0 - 17	0 - 16	0 - 13	0 - 11	0 - 13
18	G60220	12 - 0	11 - 0	0 - 12	0 - 11	14 - 0
19	GA911316E45	12 - 5	5 - 10	6 - 10	17 - 2	8 - 5
20	GA91436E29	0 - 15	0 - 17	0 - 16	0 - 16	0 - 12
21	IL94-1653	15 - 0	14 - 0	0 - 14	0 - 13	13 - 0
22	IL95-947	12 - 0	13 - 0	0 - 15	0 - 13	14 - 0
23	KY89C-804-14-2	0 - 10	0 - 13	0 - 10	0 - 12	0 - 11
24	KY90C-292-4-1	3 - 14	0 - 14	1 - 13	0 - 15	0 - 13
25	KY90C-054-6	0 - 16	0 - 15	0 - 17	0 - 14	0 - 15
26	OH645	11 - 5	10 - 5	11 - 5	15 - 1	10 - 3
27	OH650	0 - 16	0 - 13	0 - 16	0 - 13	0 - 14
28	AW-M96-3609	7 - 5	0 - 17	9 - 7	0 - 17	0 - 13
29	AW-M96-3649	6 - 10	0 - 16	8 - 12	0 - 14	0 - 16
30	AW-M96-3706	5 - 9	0 - 17	2 - 16	3 - 11	8 - 5
31	B950346	0 - 15	0 - 17	0 - 13	0 - 16	0 - 16
32	B950770	0 - 12	0 - 14	0 - 17	0 - 12	0 - 15
33	B950799	0 - 18	0 - 17	0 - 16	0 - 18	0 - 13
34	88204RB1-2-1-6-70	16 - 0	14 - 0	11 - 0	15 - 0	13 - 0
35	92145E8-7-7-1-9	2 - 13	2 - 12	0 - 13	0 - 16	1 - 12
36	92201D5-2-80	0 - 15	0 - 17	0 - 13	0 - 16	0 - 16
37	T115	14 - 0	15 - 1	0 - 13	0 - 13	15 - 0
38	T116	7 - 8	0 - 15	10 - 4	0 - 15	0 - 15
39	AR839-27-1-3	0 - 16	0 - 14	0 - 12	0 - 15	0 - 15
40	AR656-5-1	0 - 18	0 - 15	0 - 12	0 - 16	0 - 13

HESSIAN FLY

	W.Lafayette IN	Griffin GA
	Biotype L	
1	Caldwell	0 - 16
2	Foster	0 - 14
3	Patton	0 - 17
4	Roane	0 - 14
5	IL91-15911	0 - 14
6	VA97W-375	0 - 16
7	VA96W-247	0 - 15
8	T104	0 - 16
9	T106	0 - 16
10	IL94-6727	0 - 17
11	VA98W-586	0 - 16
12	VA98W-593	0 - 15
13	D6144	0 - 12
14	HTY93-72A	0 - 18
15	G65201	0 - 12
16	G53135	0 - 13
17	G53209	0 - 15
18	G60220	0 - 14
19	GA911316E45	5 - 13
20	GA91436E29	0 - 15
21	IL94-1653	0 - 13
22	IL95-947	0 - 15
23	KY89C-804-14-2	0 - 14
24	KY90C-292-4-1	0 - 16 S
25	KY90C-054-6	0 - 15 S
26	OH645	3 - 13
27	OH650	0 - 11 S
28	AW-M96-3609	0 - 16
29	AW-M96-3649	0 - 13
30	AW-M96-3706	0 - 14
31	B950346	0 - 13
32	B950770	0 - 14
33	B950799	0 - 13
34	88204RB1-2-1-6-70	9 - 7
35	92145E8-7-7-1-9	0 - 16
36	92201D5-2-80	0 - 16
37	T115	0 - 12
38	T116	0 - 15
39	AR839-27-1-3	0 - 12
40	AR656-5-1	0 - 16

PREHARVEST SPROUTING

		Lenawee, Saginaw MI
		0-9
1	Caldwell	5
2	Foster	3
3	Patton	2
4	Roane	1
5	IL91-15911	4
6	VA97W-375	2
7	VA96W-247	4
8	T104	1
9	T106	1
10	IL94-6727	2
11	VA98W-586	2
12	VA98W-593	1
13	D6144	6
14	HTY93-72A	2
15	G65201	6
16	G53135	2
17	G53209	1
18	G60220	5
19	GA911316E45	4
20	GA91436E29	3
21	IL94-1653	2
22	IL95-947	1
23	KY89C-804-14-2	2
24	KY90C-292-4-1	2
25	KY90C-054-6	0
26	OH645	2
27	OH650	2
28	AW-M96-3609	4
29	AW-M96-3649	1
30	AW-M96-3706	3
31	B950346	4
32	B950770	3
33	B950799	2
34	88204RB1-2-1-6-70	0
35	92145E8-7-7-1-9	5
36	92201D5-2-80	1
37	T115	2
38	T116	5
39	AR839-27-1-3	3
40	AR656-5-1	2
LOCATION MEANS		2.6

ACID SOIL TOLERANCE

		Enid OK	1-5	1-5	1-5
1	Caldwell	3	3	3	
2	Foster	2	3	2	
3	Patton	5	5	5	
4	Roane	2	2	2	
5	IL91-15911	3	2	3	
6	VA97W-375	2	2	2	
7	VA96W-247	2	2	2	
8	T104	2	2	2	
9	T106	2	2	2	
10	IL94-6727	4	4	4	
11	VA98W-586	2	2	3	
12	VA98W-593	3	2	1	
13	D6144	5	5	5	
14	HTY93-72A	2	2	2	
15	G65201	3	3	3	
16	G53135	3	3	3	
17	G53209	1	2	2	
18	G60220	2	1	2	
19	GA911316E45	1	1	2	
20	GA91436E29	2	2	2	
21	IL94-1653	4	5	5	
22	IL95-947	3	3	2	
23	KY89C-804-14-2	4	4	4	
24	KY90C-292-4-1	3	3	3	
25	KY90C-054-6	2	2	1	
26	OH645	2	2	2	
27	OH650	3	1	2	
28	AW-M96-3609	4	3	3	
29	AW-M96-3649	1	1	1	
30	AW-M96-3706	4	4	5	
31	B950346	1	1	1	
32	B950770	1	1	2	
33	B950799	2	1	1	
34	88204RB1-2-1-6-70	4	4	5	
35	92145E8-7-7-1-9	3	4	4	
36	92201D5-2-80	2	3	3	
37	T115	2	2	2	
38	T116	3	2	3	
39	AR839-27-1-3	2	1	1	
40	AR656-5-1	3	3	3	
LOCATION MEANS GROWTH STAGE/DATE		2.6 26-Dec	2.5 8-Apr	2.6 14-May	

1RS STATUS

Lincoln
NE

1	Caldwell	NON.1RS
2	Foster	1BL.1RS
3	Patton	1BL.1RS
4	Roane	NON.1RS
5	IL91-15911	NON.1RS
6	VA97W-375	1BL.1RS
7	VA96W-247	NON.1RS
8	T104	NON.1RS
9	T106	NON.1RS
10	IL94-6727	NON.1RS
11	VA98W-586	NON.1RS
12	VA98W-593	1AL.1RS
13	D6144	NON.1RS
14	HTY93-72A	NON.1RS
15	G65201	NON.1RS
16	G53135	NON.1RS
17	G53209	NON.1RS
18	G60220	NON.1RS
19	GA911316E45	NON.1RS
20	GA91436E29	NON.1RS
21	IL94-1653	NON.1RS
22	IL95-947	NON.1RS
23	KY89C-804-14-2	NON.1RS
24	KY90C-292-4-1	NON.1RS
25	KY90C-054-6	NON.1RS
26	OH645	NON.1RS
27	OH650	1BL.1RS
28	AW-M96-3609	NON.1RS
29	AW-M96-3649	NON.1RS
30	AW-M96-3706	NON.1RS
31	B950346	NON.1RS
32	B950770	NON.1RS
33	B950799	NON.1RS
34	88204RB1-2-1-6-70	NON.1RS
35	92145E8-7-7-1-9	NON.1RS
36	92201D5-2-80	NON.1RS
37	T115	NON.1RS
38	T116	NON.1RS
39	AR839-27-1-3	NON.1RS
40	AR656-5-1	NON.1RS

**2000 Crop
Advanced Nursery Evaluation**

MBQ – UERN Regional Composites

Entries #2601 - #2640

Composites of the Uniform Eastern Soft Red Winter Wheat Nursery were prepared that included wheat from the following locations: Keiser, Arkansas; West Lafayette, Indiana; and Blacksburg, Virginia. 40 entries were included. All 40 entries were compared to #2601, CALDWELL.

In the SWQL database of 242 Quad-milled cultivars, CALDWELL ranked 85th for adjusted yield, based on data from 82 millings:

	Database	Standard
Test Weight	58.9	59.0
Softness Equivalent	63.5	64.4
Flour Yield	71.5	72.3
Flour Protein	8.40	9.09
A.W.R.C.	56.5	57.4
Cookie Diameter	18.12	18.22
Top Grain	5	5

The CALDWELL standard was typical for the cultivar. When compared to the historical data, it was very similar.

Entries with Combined Quality Scores of "C" or better exhibited acceptable milling and baking quality. Lower scoring entries had quality deficiencies, such as low adjusted yield or small cookie diameter. A.W.R.C. values were also high for the lower scoring entries.

**ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING
QUALITY**

MBQ UERN
STD = #2601, CALDWELL

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. LB/BU	SOFT. EQUIV.	FLOUR YIELD
****	STANDARD	100.0 A	100.0 A	100.0 A	59.0	64.4	72.3
2601 1	Caldwell	100.0 A	100.0 A	100.0 A	59.0	64.4	72.3
2602 2	Foster	103.1 A	95.1 B	95.1 B	59.7	60.5 *	74.7
2603 3	Patton	91.9 C	80.5 E	80.5 E	59.9	57.7 *	71.1 *
2604 4	Roane	86.3 D	62.0 F	62.0 F	62.4	59.6 *	69.1 Q
2605 5	IL91-15911	96.6 B	87.2 D	87.2 D	60.3	62.8	71.5 *
2606 6	VA97W-375	85.9 D	85.1 D	85.1 D	60.6	53.9 Q	70.0 Q
2607 7	VA96W-247	88.9 D	73.9 F	73.9 F	60.1	58.6 *	70.2 Q
2608 8	T104	95.4 B	101.9 A	95.4 B	60.6	62.1	71.3 *
2609 9	T106	89.4 D	80.6 E	80.6 E	59.7	62.9	69.7 Q
2610 10	IL94-6727	94.9 C	97.1 B	94.9 B	61.3	61.2	71.2 *
2611 11	VA98W-586	93.2 C	93.2 C	93.2 C	60.6	61.8	70.7 Q
2612 12	VA98W-593	86.9 D	71.3 F	71.3 F	63.3	52.9 Q	70.3 Q
2613 13	D6144	94.6 C	30.1 F	30.1 F	61.2	44.7 Q	75.8
2614 14	HTY93-72A	90.0 D	87.5 D	87.5 D	62.5	61.7	69.7 Q
2615 15	G65201	101.4 A	93.0 C	93.0 C	60.6	61.9	72.9
2616 16	G53135	91.9 C	96.8 B	91.9 C	59.6	56.1 Q	71.4 *
2617 17	G53209	96.5 B	89.8 D	89.8 D	59.5	65.4	71.2 *
2618 18	G60220	93.7 C	79.3 F	79.3 F	61.1	59.0 *	71.2 *
2619 19	GA911316E45	94.0 C	91.2 C	91.2 C	61.9	58.2 *	71.3 *
2620 20	GA91436E29	87.1 D	81.1 E	81.1 E	60.5	54.4 Q	70.3 Q
2621 21	IL94-1653	92.9 C	75.1 F	75.1 F	61.3	59.3 *	70.9 *
2622 22	IL95-947	97.0 B	101.1 A	97.0 B	60.8	60.0 *	72.0
2623 23	KY89C-804-14-2	93.4 C	79.7 F	79.7 F	59.1	62.1	70.9 *
2624 24	KY90C-292-4-1	85.9 D	66.4 F	66.4 F	60.7	59.6 *	69.2 Q
2625 25	KY90C-054-6	93.5 C	83.6 E	83.6 E	60.1	61.9	70.9 *
2626 26	OH645	97.2 B	98.5 B	97.2 B	61.0	61.1	71.8
2627 27	OH650	85.1 D	83.3 E	83.3 E	61.5	52.4 Q	70.0 Q
2628 28	AW-M96-3609	86.5 D	84.2 E	84.2 E	58.7	57.7 *	69.8 Q
2629 29	AW-M96-3649	89.6 D	86.0 D	86.0 D	60.9	52.7 Q	71.1 *
2630 30	AW-M96-3706	89.6 D	78.3 F	78.3 F	60.0	61.2	70.0 Q
2631 31	B950346	91.0 C	93.3 C	91.0 C	61.2	57.4 Q	70.8 *
2632 32	B950770	90.5 C	83.6 E	83.6 E	61.9	58.5 *	70.4 Q
2633 33	B950799	86.5 D	75.2 F	75.2 F	59.7	59.3 *	69.5 Q
2634 34	88204RB1-2-1-6-70	84.8 E	81.3 E	81.3 E	59.4	57.2 Q	69.4 Q
2635 35	92145E8-7-7-1-9	91.2 C	95.7 B	91.2 C	58.8	59.2 *	70.8 *
2636 36	92201D5-2-80	88.0 D	70.0 F	70.0 F	61.7	58.4 *	69.8 Q
2637 37	T115	82.1 E	74.9 F	74.9 F	59.5	58.9 *	68.4 Q
2638 38	T116	91.9 C	94.2 C	91.9 C	61.5	58.6 *	70.8 *
2639 39	AR839-27-1-3	99.8 B	88.9 D	88.9 D	61.7	56.3 Q	73.2
2640 40	AR656-5-1	92.2 C	100.4 A	92.2 C	60.8	56.2 Q	71.3 *

**ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING
QUALITY**

MBQ UERN
STD = #2601, CALDWELL

	ENTRY	FLOUR PROT.	MICRO AWRC	COOKIE DIAM.	TOP GR.
	STANDARD	9.09	57.4	18.22	5
1	Caldwell	9.10	57.4	18.22	5
2	Foster	9.60	55.3	18.02	2
3	Patton	10.54	58.2	17.65 Q	4
4	Roane	10.03	60.5 *	16.95 Q	3
5	IL91-15911	9.59	57.2	17.64 Q	3
6	VA97W-375	10.27	56.5	17.82 *	3
7	VA96W-247	9.33	60.3 *	17.55 Q	2
8	T104	8.70	57.5	18.42	3
9	T106	8.96	60 *	17.66 Q	4
10	IL94-6727	9.65	57.9	18.27	3
11	VA98W-586	10.06	56.6	17.9 *	1
12	VA98W-593	9.60	60.5 *	17.69 Q	2
13	D6144	10.65	61.8 Q	16.2 Q	2
14	HTY93-72A	8.89	60 *	18.05	3
15	G65201	8.68	61.3 Q	18.53	6
16	G53135	9.96	54	18.29	2
17	G53209	9.61	58.8	17.85 *	2
18	G60220	10.02	58	17.52 Q	3
19	GA911316E45	11.15	56.1	17.93 *	1
20	GA91436E29	11.37	54.1	17.6 Q	1
21	IL94-1653	9.45	58.5	17.36 Q	3
22	IL95-947	9.41	56.5	18.35	3
23	KY89C-804-14-2	9.93	59.7 *	17.62 Q	2
24	KY90C-292-4-1	9.79	59.9 *	17.1 Q	1
25	KY90C-054-6	9.54	58.5	17.66 Q	3
26	OH645	9.88	55.9	18.16	3
27	OH650	10.42	55.4	17.79 *	3
28	AW-M96-3609	10.49	56.6	17.63 Q	2
29	AW-M96-3649	10.10	55.1	17.91 *	3
30	AW-M96-3706	9.93	59.6 *	17.57 Q	2
31	B950346	10.31	55.5	18.07	2
32	B950770	11.12	56.1	17.55 Q	1
33	B950799	11.68	58.5	17.37 Q	1
34	88204RB1-2-1-6-70	9.94	57.4	17.61 Q	1
35	92145E8-7-7-1-9	9.41	56.1	18.11	4
36	92201D5-2-80	9.55	60.5 *	17.4 Q	2
37	T115	9.65	58.8	17.4 Q	2
38	T116	10.02	55.1	18.06	3
39	AR839-27-1-3	10.04	54.2	17.9 *	3
40	AR656-5-1	9.59	54.8	18.56	6